

**COMMONWEALTH OF VIRGINIA
INVITATION FOR BIDS (IFB) # 301-21-063**

Issue Date: March 3, 2021

Title: Gypsy Moth Aerial Insecticide Spraying

Commodity Codes: 02046, 90541

Issuing Agency: Commonwealth of Virginia
Department of Agriculture & Consumer Services
Purchasing Office, Second Floor
P. O. Box 1163
Richmond, Virginia 23218

Location of Delivery: The counties of Halifax, Russell, and Washington and the City of Chesapeake, in the Commonwealth of Virginia.

Sealed Bids Will Be Received Until: March 24, 2021, no later than 2:00 p.m. For furnishing, the goods described herein and then opened in public.

All inquiries or questions related to this solicitation must be submitted in writing, preferably via email, to:
Paula Williams, VCO, Senior Contract Specialist, Procurement and Support Services, Email:
paula.williams@vdacs.virginia.gov, Telephone: 804.225.3798, Fax: 804.371.8372

IF BIDS ARE MAILED, SEND DIRECTLY TO ISSUING AGENCY SHOWN ABOVE. IF BIDS ARE HAND DELIVERED OR MAILED VIA A PARCEL SERVICE, DELIVER TO: Paula Williams, Procurement Office, Oliver W. Hill Building, 102 Governor Street, Room 265, Richmond, VA 23219.

In compliance with this Invitation For Bids (IFB) and all conditions imposed in this IFB, the undersigned firm hereby offers and agrees to furnish all goods and services required by this IFB at the prices indicated in the pricing schedule, and the undersigned firm hereby certifies that all information provided below and in any schedule attached hereto is true, correct, and complete. Contracts will be awarded to eVA registered vendors only.

Name and Address of Firm:

_____ Date: _____

_____ By: _____
(Signature in Ink)

_____ Zip Code _____ Name: _____
(Please print)

eVA Vendor ID or DUNS #: _____ Title: _____

Fax Number :() _____ Telephone: () _____

Email Address: _____

DSBSD Certified Small Business? Yes / No. If yes, provide DSBSD Certification No.: _____

State Corporation Commission ID Number: _____

Note: This public body does not discriminate against faith-based organizations in accordance with the *Code of Virginia*, § 2.2-4343.1 or against a bidder or offeror because of race, religion, color, sex, national origin, age, disability, sexual orientation, gender identity, political affiliation, or veteran status or any other basis prohibited by state law relating to discrimination in employment. Faith-based organizations may request that the issuing agency not include subparagraph 1.e in General Terms and Condition C. Such a request shall be in writing and explain why an exception should be made in that invitation to bid or request for proposal.

RETURN OF THIS COVER SHEET IS REQUIRED

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I. PURPOSE

The intent and purpose of this Invitation for Bids (IFB) is to establish a fixed unit price contract on a per acre basis with one (1) qualified firm to provide aerial applications of *Bacillus thuringiensis* subspecies *kurstaki* (*Btk*) on approximately **5,438 acres ±10%**, located in the counties of Halifax, Russell, & Washington, and the City of Chesapeake in the Commonwealth of Virginia and during the period specified. Table 1 below shows the specifics for each locality. Three sites in the City of Chesapeake will be treated with two applications, 5-7 days apart. Three sites in the counties of Halifax, Russell, & Washington will be treated with a single application. All sites will be treated with *Bacillus thuringiensis* subspecies *kurstaki* (Foray 48B), 24CLU per acre, undiluted; spray volume of ½ gallon per acre. The aerial spraying will be for treatment of the gypsy moth on behalf of and in cooperation with USDA-Forest Service (USDA-FS), and the Virginia Department of Agriculture and Consumer Services (VDACS).

Table 1. TREATMENT ACREAGE

Site Name	Acres	Estimated Treat Acres	Estimated 2nd Application	County/City	PRODUCT	DOSAGE
Lake Drummond SE Cavalier WMA	411	370	370	Chesapeake City	Foray 48B	24CLUx2
Lake Drummond SE Ranger RD	309	300	300	Chesapeake City	Foray 48B	24CLUx2
Lake Drummond SE TNC	411	400	400	Chesapeake City	Foray 48B	24CLUx2
Brumley West	1,100	1,000	-	Russell, Washington	Foray 48B	24CLUx1
Brumley East	598	598	-	Washington	Foray 48B	24CLUx1
Omega	1,834	1,700	-	Halifax	Foray 48B	24CLUx1
Estimated Treat Acres		4,368	1,070			
Estimated Maximum Treat Acres		5,438				

Treatments are open to bidders using helicopters or fixed-wing aircraft. The Contractor shall provide the insecticide, *Btk*, (Foray 48B), and its cost must be included in the price per acre bid. The Contractor shall provide a functional Differentially Corrected Global Positioning System (DGPS) in all spray aircraft. Make and model of the DGPS to be used is requested on the pricing schedule on this bid.

II. PREREQUISITES TO BIDDING

A. **QUALIFICATIONS REQUIRED.** Bidders desiring to submit a bid on the VDACS Gypsy Moth Aerial Insecticide Spraying Program must meet the following minimum requirements, in order to have their bid considered:

1. Bidders shall have a minimum of five (5) years of related experience in aerial pesticide application, similar to the acreage and terrain in this IFB.
2. Bidders must be a fixed base operator (FBO), or a firm certified as a commercial aircraft operator with an office, maintenance facilities, owned or leased aircraft, employees, mechanics, tools, equipment, and spare parts for the make and type of aircraft specified in this proposal. Bidders must be 1) certified with the Federal Aviation Administration (FAA), and 2) all aircraft to be used in this project must be FAA certified.

3. Bidders must comply with qualification requirements as specified by the Virginia Department of Aviation and the FAA and **must** be certified under Federal Aviation Regulations (FAR) 14 CFR Part 137 (Agricultural Aircraft Operations) at time of bid submission. Copies of such certifications are requested to be included with the bid submission.
4. Any pilots intended to be used for this project must have at least two (2) seasons experience in low level, related aerial spraying, over terrain similar to that of the contract treatment areas. Application pilots must be proficient at reading and navigating from topographic maps and in using Differential Global Positioning Systems (DGPS), and must meet or exceed the following experience minimums as pilot in command:

APPLICATION PILOT

HOURS OF FLYING

a. Total: all aircraft.....	2,000
b. Aerial Application/Agriculture flight time.....	1,200
c. Night time.....	100
d. Cross-Country.....	500
e. Type (rotary/fixed), to be flown in project.....	200
f. Category and Class, to be flown in project.....	200
g. Make, Model, and Series, to be flown in project.....	50
h. Forest pesticide application in mountainous terrain.....	100

Bidders **must** answer all questions on **Attachment C** pertaining to application pilot qualification, including the name of the pilot, commercial pesticide applicator license number, FAA medical certificate class and date of examination, flight hours in command (as specified), number of seasons of forestry pesticide spray experience, and other required information. **Attachment C** is required to be returned with the bid. VDACS reserves the right to reject any pilot whom, in its opinions or through verified references, has performed unsatisfactorily in past projects, whether in Virginia or elsewhere. **Examination of flight logs for verification of experience may be required at the discretion of the VDACS Contract Administrator.**

5. Application pilots intended to be used for this project must have active and valid Virginia Commercial Pesticide Applicator Licenses in Category 11 (Aerial Pesticide Application) by VDACS' Office of Pesticide Services. In the event any application pilot does not hold a current, valid Commercial Pesticide Applicator's License in Category 11 through VDACS' Office of Pesticide Services, the bidder may provide evidence that the pilot(s) hold an equivalent certification with another State Department of Agriculture. In those circumstances, VDACS will provide bidders no more than ten (10) business days upon notification to obtain the appropriate certification from VDACS' Office of Pesticide Services. Any delays in this process may hinder the VDACS' ability to properly treat for the Gypsy Moth.
6. The Awarded Bidder must hold a valid Virginia Pesticide Business License. In the event the Bidder does not hold a current, valid Virginia Pesticide Business License, through VDACS' Office of Pesticide Services, the VDACS will provide bidders no more than ten (10) business days upon notification to obtain the pesticide business from VDACS' Office of Pesticide Services. Any delays in this process may hinder the VDACS' ability to properly treat for the Gypsy Moth.

7. The specific aircraft to be utilized to perform the services must hold an FAA License and a Virginia Commercial Aircraft License. The Commercial Aircraft License is issued by the Virginia Department of Aviation (VDA) and can be obtained by contacting the VDA. Copies of both the FAA License and the Virginia Commercial Aircraft License (for each aircraft intended to be used for this project) are required to be submitted with the bid. If a current license is not held at time of bid submission, the bid may not be considered, as this contract has strict and biological deadlines. Any delays in this process may hinder the VDACS' ability to properly treat for the Gypsy Moth.
8. Appropriate insurance held prior to and during the life of the contract by the Bidder and any subcontractors to be used for this contract in the amounts specified in Section XV – Item R. Evidence of such insurance must be provided in the appropriate amounts specified and the insurance company must be authorized to conduct business in the Commonwealth of Virginia.
9. Bidders must have an Aircraft Contingency Plan, addressing how the awarded contractor will replace aircraft or pilot, in the event of a malfunction or accident and must be provided to VDACS upon request.

B. **REQUIRED DOCUMENTS.** Bidders are required to fully complete **Attachments A-C**, along with any additional required pages, addressing the above prerequisites and show proof that the requirements have been met and submit them as a part of the bid package.

III. SCOPE OF WORK

A. **TREATMENT AREAS.** As specified in Section I, it is the VDACS' intent to treat approximately 5,438 ($\pm 10\%$) acres of forested lands in the Commonwealth of Virginia, consisting of six (6) spray blocks, as scheduled in Table 1 with Foray 48B, at a rate of $\frac{1}{2}$ gallon, per acre. The acreage listed in an estimate of the treatable acres within the sites and **should not** be considered verified treatable acres. VDACS may be required to make adjustments to the spray areas based on program needs or if landowners choose to be removed from the treatment program. The awarded contractor will not be paid for any acreage treated outside of the designated block boundaries. The following is a breakdown of the specific applications, by locality:

1. **Area 1 – City of Chesapeake**

- a. Localities Involved: **Chesapeake City**
- b. Type of Areas to be Treated: **State and Private Lands**
- c. Total Acres: **Approximately 1,070 acres (estimated); double application**
- d. Number of Spray Blocks: **3 blocks (see Appendix A)**
- e. Estimated Spray Dates: **April 5-26, 2021 (depending on weather conditions and larval/foilage development)**
- f. Estimated Completion Time: **One (1) – Three (3) weeks**
- g. Required Aircraft: **See Attachment D for approved Aircraft Classes**

- h. Insecticide: ***Bacillus thuringiensis* subspecies *kurstaki* (Btk); Foray 48B, 24 CLU per acre, undiluted; spray volume of ½ gallon per acre**
- i. Loading Zones and/or Airfields: **See Section V for details on loading zones, airfields, deadlines, and equipment/personnel requirements**

2. Area 2 – Halifax County

- a. Localities Involved: **Halifax**
- b. Types of areas to be treated: **US Army Corp of Engineers, State, and Private Lands**
- c. Total Acres: **Approximately 1,700 acres (estimated); single application**
- d. Number of Spray Blocks: **1 Block (see Appendix A)**
- e. Estimated Spray Dates: **April 15-30 (depending on weather conditions and larval/foilage development)**
- f. Estimate Completion Time: **One (1) week**
- g. Required Aircraft: **See Attachment D for approved Aircraft Classes**
- h. Insecticide: ***Bacillus thuringiensis* subspecies *kurstaki* (Btk); Foray 48B, 24 CLU per acre, undiluted; spray volume of ½ gallon per acre**
- i. Loading Zones and/or Airfields: **See Section V for details on loading zones, airfields, deadlines, and equipment/personnel requirements**

3. Area 3 – Russell & Washington

- a. Localities Involved: **Russell and Washington**
- b. Types of areas to be treated: **State Wildlife Management Area and Private Lands**
- c. Total Acres: **Approximately 1,598 acres (estimated); single application**
- d. Number of Spray Blocks: **2 Blocks (see Appendix A)**
- e. Estimated Spray Dates: **May 14-28 (depending on weather conditions and larval/foilage development)**
- f. Estimate Completion Time: **Two (2) weeks**
- g. Required Aircraft: **See Attachment D for approved Aircraft Classes**
- h. Insecticide: ***Bacillus thuringiensis* subspecies *kurstaki* (Btk); Foray 48B, 24 CLU per acre, undiluted; spray volume of ½ gallon per acre**
- i. Loading Zones and/or Airfields: **See Section V for details on loading zones, airfields, deadlines, and equipment/personnel requirements**

IV. GENERAL STIPULATIONS

- A. ***TIMING OF TREATMENTS.*** The application period begins on the date when the Contractor is required to report on site and continues until the final acceptable application is made. The awarded Contractor shall be on site, prepared, and meet all contract specifications for the treatments. It is our objective to get all applications applied consistent with program requirements and restraints in as short a period as possible. Weather conditions that influence insect and tree foliage development will determine the specific starting date of the application period in each project. Estimated starting dates, based upon previous experience, are given above. The project is to be completed (start to finish) within 60 days, depending upon weather and leaf and insect development. It is possible that the starting date could start a minimum of 15 days earlier or later than estimated. Five (5) days advance notice will be given to the Contractor of the date on which to report. The reporting date may be adjusted by mutual agreement due to inclement weather or other reasons beyond the control of either party.

The awarded Contractor shall be responsible for being prepared and present for treatment spray dates as listed in Section III, Item A, numbers 1-3.

VDACS reserves the right to start all the aircraft required in a project on the same date or to separate the starting dates for particular aircraft by several days and reserves the right to suspend operations based on differences in insect development or phenology.

- B. ***DELETING ACRES.*** If, after the execution of the contract, insect population levels, because of unforeseen biological or environmental conditions, do not warrant treatment, or the Department receives a request from a landowner to be excluded from the treatment project, the VDACS may, at its discretion, remove treatment acreage as stated in this contract. The Contractor will be compensated only for the acreage that is treated.
- C. ***CONTRACTED ACRES/FUNDING AVAILABILITY.*** If anticipated state and/or federal funds are not available at a level sufficient to fund the Contract at the level bid or if acreage must be dropped for any reason prior to the execution of the Contract, the Contract, either will not be executed or the Contract acreage will be reduced in scope. In the event the Contract acreage is reduced, the Contract will be written to reflect the reduced acreage figure and the Contractor will be compensated per the actual acreage that is treated.
- D. ***GENERAL PURPOSE.*** The awarded Contractor shall provide all application aircraft, insecticide material, aircraft guidance and tracking equipment (DGPS), automated flight following (AFF), miscellaneous service equipment, ground and flight personnel, supplies and all other incidentals to perform these services in accordance with the technical specifications contained herein.
- E. ***CANCELLATION.*** In the event that the Contract must be cancelled for any reason that is beyond the control of the VDACS or the Contractor after the execution of the Contract, the Contractor will not receive compensation after the cancellation. If work had already been performed prior to such cancellation, the Contractor will receive payment for services rendered, prior to the date of cancellation. Such reasons may include, but are not restricted to, acts of God or of the public enemy, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather; but in every case, the failure to perform must be beyond the control and without the fault or negligence of the Contractor.

V. OBLIGATIONS OF THE VENDOR

- A. **GENERAL.** The Contractor will be required to furnish spray aircraft, all support equipment, all insecticide material, and ground and aerial personnel necessary to produce insecticide applications in accordance with the Invitation for Bid. Other sections in this IFB give more specific information on the aircraft, equipment, and personnel required. The Contractor maintains responsibility for the entire project, even if another company is providing part of the equipment and personnel. Information regarding the contract specifications is contained in the following.
- B. **PERSONNEL.** The awarded Contractor will furnish qualified, licensed, and experienced personnel necessary to perform the application of pesticides for the control of the Gypsy Moth in accordance with this IFB. Vendor-supplied personnel are identified in Section VI.
- C. **LICENSES AND CERTIFICATIONS.** The awarded Contractor and all personnel involved with the project shall have all appropriate licensing and certifications as outlined in Section II, Item A, numbers 1-9.
- D. **PROOF OF INSURANCE.** The Awarded Contractor must provide proof of insurance as specified in Section XV, Item R. for all aircraft and other equipment owned, leased, rented, subcontracted, or otherwise utilized by the Contractor and for all personnel hired, subcontracted, or otherwise employed by the Contract. Insurance must be held throughout the length of the contract.
- E. **AIRCRAFT.** The Contractor shall be responsible for furnishing all appropriate licensed aircraft for this treatment project. Aircraft requirements and specifications is located in Section XI.
- F. **INSECTICIDES.** The Contractor shall be responsible for purchasing, furnishing, transport, security, storage, and application of insecticide for this project. More details outlining the Vendor's responsibility can be found in Section IX.
- G. **PRE-WORK BRIEFING.** The Contractor and any subcontractors are required to attend a pre-spray safety briefing as described in Section VII, Item B.
- H. **PRE-SPRAY MEETING.** The Contractor and any subcontractors are required to attend a post-spray meeting to review the spray program as described in Section VII, Item C.
- I. **POST-SPRAY MEETING.** The Contractor shall attend the post-spray meeting following the completion of all treatments as described in Section VII, Item D.
- J. **AIRPORT AND LANDING ZONE SELECTION.** It is the responsibility of the Contractor to select airports or landing zones to be used as a base of operations for the project and to make any necessary arrangements for use with the airport manager or landowner including areas for calibration and characterization. Use of the sites must not present problems from a legal aspect, and permission to use the site must be obtained by the Contractor. It is desired that the Contractor notify the STS Project Supervisor **prior to April 1**, of the landing zones selected for use. This notification shall be in the form of a Geographical Information System (GIS) point shapefile and include data fields containing the LZ location (Latitude / Longitude in decimal degree format), the name, address, and phone number of the landowner or airfield manager. The contractor must follow-up on its contact with the landowner two weeks prior to the anticipated start of operations to ensure that the property is still available for use.

- K. **FAA WAIVER FOR CONGESTED AREAS.** The Contractor is responsible for reviewing all spray block maps and for identifying congested areas that would require an FAA waiver in order to conduct low-level flights over them. The Contractor is responsible for filing the required plan and documentation with the appropriate FAA Flight Safety District Office for congested areas so identified, for obtaining the necessary waiver(s), and for providing proof of such to the STS Project Supervisor **no later than two weeks prior to** the start of the project. Each aircraft must have a copy of the Congested Area Plan for the Project during operations.
- L. **AUTOMATED FLIGHT FOLLOWING (AFF).** The Contractor will provide aircraft, supporting equipment, and services to provide automated flight following of aircraft for this project. Contractor will provide VDACS with access to these services for the duration of this project. Aircraft will be tracked during applications. See Appendix B for more information.
- M. **MAINTENANCE.** The Contractor is expected to maintain a readily available on-site inventory of commonly needed spare parts and spare equipment including, but not limited to, pumps, pump seals, and rotary atomizers to maintain the spray system, the aircraft and its electronic guidance and tracking system, the pumping system, the support trucks, and the storage tanks and to provide for immediate replacement of critically needed parts and equipment. Scheduled maintenance must be conducted only at times that will not interfere with the spray operation. Non-scheduled maintenance may be conducted, but it is not to interfere with spray operations for longer than a period of one hour. Only emergency repairs are permitted during scheduled spray hours. Care must be taken to prevent leakage of spray material at all times and a proper spill containment plan must be included in the Contractor's Safety Plan.
- N. **AIRCRAFT AND PILOT REPLACEMENT PLAN.** The Contractor shall provide a written plan outlining how it plans to handle an emergency situation where an aircraft or pilot may need to be replaced, in the event that there is an emergency with the aircraft or a pilot cannot perform their duties, whether voluntary or involuntary. The plan should identify how the contractor will meet the deadlines of replacing both aircraft and pilots to ensure no lapse in services provided occurs.
- O. **SECURITY.** The Contractor must abide by any current regulations issued by the FAA with regard to aircraft and insecticide safeguarding and security, as well as any rules and/or recommendations that are issued by state agencies, the Environmental Protection Agency, the USDA Forest Service, the Department of Homeland Security or any other responsible agency. At a minimum, the Contractor must provide the following:
1. Chain-of-custody documentation (and/or shipping manifest) from the point of manufacture to delivery to the Contractor for the insecticide utilized.
 2. All spray aircraft must be disabled when not in use so that they cannot be started by anyone other than authorized personnel.
 3. All insecticide holding containers, hoppers, mix tanks, pumps, hoses, and similar equipment must be flushed prior to the start of operations and must have all possible points of entry sealed and secured when not in use.
 4. All spray aircraft and any associated insecticide and insecticide-handling equipment must be attended-to or guarded at all times, unless located at a restricted access secure airfield or if a waiver is issued by VDACS. **Contractor will supply security personnel during off duty hours, if needed.**
 5. Access to the insecticide loading and storage areas must be restricted to authorized personnel of the Contractor and VDACS staff.

- P. **FIELD EXPENSES AND TRANSPORTATION.** Costs incurred in the operation and maintenance of all contractor equipment are the sole responsibility of the Contractor. Expenses incurred by all Contractor personnel including arrangements for food, lodging, and transportation are the sole responsibility of the Contractor. The Contractor is responsible for providing a means of ground transportation for Contractor personnel.
- Q. **SPILL CLEANUP EXPENSES.** The Contractor is responsible for any and all cleanup activities and costs resulting from any contamination caused by the accidental or intentional spilling, leakage, or dumping of insecticide, fuel, oil, or any other contaminant from Contractor-supplied equipment.
- R. **SAFETY PLAN.** The Contractor is required to conduct all operations in a safe manner and to have a well-defined, written safety plan. The Contractor must provide essential safety equipment including, but not limited to, properly sized and coded fire extinguishers and spill-containment materials and supplies. All Contractor and VDACS project personnel must be briefed by the Contractor in their use.

The Contractor must supply the STS Project Supervisor with a copy of the Contractor's safety plan at least two (2) weeks prior to the start of the project. This plan must explain how the Contractor will meet the security requirements specified in Section V, Item O. The safety plan must also contain a written narrative explaining how the Contractor will deal with a major (100+ gallons) fuel or insecticide spill at the loading zone and a major dump of insecticide in a residential spray block.

VI. VENDOR PERSONNEL

- A. **PROJECT SUPERVISOR (Contractor).** The Contractor shall designate one of its personnel to serve as the on-site Project Supervisor and will represent the company in all contractual matters that require prompt attention. This person must be familiar with all equipment being used and, as necessary, must be certified or registered Pursuant to the Virginia Pesticide Control Act and any associated rules, and regulations administered by VDACS. If the project involves the use of no more than one loading zone at any given time, a spray pilot or ground-support person may serve as the project supervisor. If the project involves the simultaneous use of two or more loading zones, the project supervisor must not be assigned to regularly fly an aircraft or serve as ground support for any aircraft. The project supervisor may, if qualified, be used as an alternate spray pilot if the regular pilot is debilitated or otherwise unavailable.
- B. **PILOTS.** The Contractor shall furnish all pilots for this project that meet the following criteria and certifications and abide by the following restrictions and limitations:
1. **FAA Qualifications:** The Contractor shall provide FAA qualified pilots to operate the aircraft specified in the bid. Each spray pilot, whether in a primary or backup role, shall be qualified under FAR Part 137 and shall provide written evidence which include copies of valid licenses and qualifications for all pilots operating aircraft under this contract to the VDACS.
 2. **Pilot List:** The Contractor must provide to the STS Supervisor (Larry Bradfield) with a list of all pilots, including any alternate spray pilots slated for use on this project. Each pilot listed for use on the project, whether primary or as an alternate, must complete an Application for Spray Aircraft Pilot Approval Form supplied as Attachment C.
 3. **Experience:** Each spray pilot must have a minimum two (2) seasons of low level spraying experiences over forested areas. Low-level applications are defined as meaning spraying within 100 feet of the top of the forest canopy. For the required experience, see Section II, Item A, subsection 4.

4. **Maps and DGPS:** Every pilot must be proficient at reading and navigating from topographic maps. Every pilot must also be proficient in the operation of the aircrafts DGPS guidance system.
5. **Commercial Pesticide Applicator's License:** All pilots used for this project must hold a valid, current Virginia Commercial Pesticide Applicator's License in Category 11 (Aerial Pesticide Application). In the event any pilot does not hold a current applicator license issued by the Virginia Department of Agriculture, it must be obtained within ten (10) days after notification.
6. **Protective Gear:** The Contractor shall ensure that all pilots have any required PPE, protection gear, or other clothing as required by the FAA.
7. **Pilot Responsibilities:** When in flight, the pilot is responsible at all times for the safety of the aircraft and personnel. The spray pilot is responsible for the accurate and proper application of the insecticide spray to the designated site using good application delivery procedures as generally recognized as correct by professionals in the aerial application industry. The pilot is responsible for being able to proficiently operate all of the aircraft's electronic equipment including, but not limited to, radios, GPS guidance system. The pilot is responsible at all times for the safe operation of the aircraft. VDACS will not require flying in fog, dense smoke, or under any other adverse conditions which a prudent pilot would avoid nor is the pilot required to operate from any site which the pilot considers unsafe. The pilot is responsible for the identification and avoidance of all flight hazards in route to, from, and within the operation area. The pilot must make a reconnaissance flight over each spray block to identify and locate any such hazards or congregations of people prior to treating the block. The pilot must avoid spraying any congregation of people. The pilot is responsible for communicating with all appropriate air traffic control facilities within the area of operation. The pilot is responsible for maintaining radio communication with VDACS. The pilot must contact, via radio, the VDACS when the pilot begins spraying a block, when a block is finished, and when a spray load is finished. Failure to maintain proper radio communications may result in the removal of the pilot from spray operations. In situations when the distance of a treatment area from the loading zone inhibits the ability for the pilot to communicate with the program supervisor, the pilot may communicate via radio with assigned VDACS block monitors, if applicable. During extended spray periods, the pilot is permitted to take a short break between loads whenever desired.
8. **VDACS' Right to Reject:** VDACS reserves the right to reject the Contractor's use of any pilot who, in VDACS opinion, has performed unsatisfactorily in previous operations, whether in the Commonwealth of Virginia or elsewhere. VDACS reserves the right to permanently reject any pilot who, in the agency's opinion, violates these Contract Specifications, is unsafe, or otherwise performs unsatisfactorily.
9. **Alcohol Consumption:** A pilot used for this project may not consume alcohol or a nonprescription medication containing alcohol within 8 hours of scheduled flight time. Any pilot observed by VDACS consuming alcohol or exhibiting symptoms of alcohol intoxication or impairment or any other intoxication or impairment will not be authorized for flight for 24 hours. A second occurrence will result in the pilot being dismissed from the project.
10. **Controlled Substance Use:** Any pilot observed by the VDACS using or in possession of any nonprescription, controlled substance such as, but not limited to, marijuana, hashish, cocaine, heroin, and/or amphetamines shall be immediately dismissed from the project. Such findings will be reported to the appropriate law enforcement agency and the FAA for further actions.
11. **Duty Limitations:** Assigned duty of any kind shall not exceed 14 hours in any 24-hour period. "Duty" includes flight time, ground duty of any kind, and standby. Local travel up to a maximum of 30 minutes each way between the worksite and place of lodging will not be considered duty time. Pilots will be subject to the following duty hour limitations:
 - a. A maximum of 14 consecutive duty hours during any assigned duty period.
 - b. The pilot must be given 2 calendar days of rest (off duty) within any 14 consecutive calendar days.

- c. The pilot must be given a minimum of 10 consecutive hours of rest (off duty) prior to any assigned duty period.
- d. The above limits notwithstanding, pilots are expected to notify the program supervisor if they become fatigued prior to reaching the duty day limit.

The STS Project Supervisor (Larry Bradfield) or representative may waive the "consecutive" 10 hour rest period (off duty) limitation, in this section, to provide pilots two nonconsecutive off-duty rest periods, provided the accumulated rest periods equal no less than 12 hours of off duty time in any 24-hour period.

One of the rest periods must include at least 8 hours of uninterrupted rest. This waiver may not be granted more than three times in any 14-duty-day cycle.

12. **Flight Limitations:** Each pilot must report all flight time, regardless of how or where performed, except personal pleasure flying. All pilots reporting for duty may be required to submit a record of all duty and/or flight time during the previous 14 days. This record will be used to administer flight and duty time limitations.

Flight time to and from a duty station as a pilot (commuting) will be reported and counted toward limitations. Flight time includes but is not limited to military flight time, charter, flight instruction, 14 CFR Part 61.56 flight review, flight examination by FAA designees, any flight time for which a pilot is compensated, or any other flight time of a commercial nature whether compensated or not.

Pilots will be limited to the following flight hour limitations, which must fall within their duty hour limitations:

- a. A maximum of 8 hours flight time during any assigned duty period. Pilot flight hour computations shall begin at lift off and end at touchdown.
- b. A maximum of 42 hours flight time during any consecutive six-day period. When a pilot acquires 36 or more flight hours in a consecutive six-day period, the pilot will be given the following one calendar day off duty for rest, after which a new six-day cycle will begin.
- c. Flights point-to-point (airport-to-airport, etc.) with a pilot and co-pilot shall be limited to 10-flight hours per day. (An aircraft that departs from "Airport A", and flies reconnaissance on a treatment block and then flies to "Airport B" is not point-to-point).
- d. When pilots act as a mechanic, mechanic duties in excess of 2-hours will apply as flight hours on a one-to-one basis toward flight hour limitations.

The Contractor must monitor and remove any personnel for fatigue or other causes before they reach their daily duty or flight limitations.

Relief, additional, or substitute pilots reporting for duty under this Contract shall furnish a record of all duty and all flight hours during the previous 14-days.

- C. **GROUND SUPPORT PERSONNEL.** The Contractor shall supply sufficient numbers of properly trained and qualified ground-support personnel to carry out project logistics including, but not limited to, driving all necessary support vehicles, handling insecticides, operating and maintaining the equipment used to transfer insecticides, and properly fuel, service, and maintain each aircraft. All ground-support personnel must be familiar with the aircraft's spray system and knowledgeable of calibration techniques in the event an incident affects the equipment. All personnel provided by the Contractor must be experienced and fully trained in their duties and be able to communicate in English. All ground personnel involved with the handling of insecticide must be supervised, certified, or registered as required by the VDACS.

All ground-support personnel must be equipped and trained to take proper action in an emergency. These people must observe all safety precautions in handling the insecticides and in refueling the aircraft. The Contractor shall replace any ground-support person who, in the opinion of the VDACS does not demonstrate the knowledge and capability to perform his/her duties.

VII. OBLIGATIONS OF VDACS

- A. **PERSONNEL.** VDACS will furnish personnel to supervise and direct the aerial and spray operations of the Virginia STS Project treatment applications listed in Section VIII.
- B. **PRE-WORK BRIEFING.** VDACS expects to conduct a pre-work briefing for the awarded Contractor and all subcontractors by **April 1** of the current project year. All Contractor Project Supervisors involved with the project and any subcontractors will be required to present their report on personnel and equipment. The briefing will include the VDACS STS Project Supervisor, other VDACS staff, the Contractors representative, and subcontractors' representatives, and any other invited persons to discuss, among other things, contract specifications, project deadlines, and program safety and security. **Participation at this meeting is required for all Contractors and subcontractors working on the project.**
- C. **PRE-SPRAY MEETING.** At a time, date, and location agreeable to all parties, no later than two (2) days prior to the scheduled start of aerial operations, representatives of the VDACS STS Project Supervisor and Contractor shall meet and discuss the aerial operations and application program. Topics for discussion shall include, but are not limited to, logistics for aerial application and observation aircraft (if needed); assigning treatment blocks to application aircraft; the handling, mixing and application of the insecticides; aircraft capabilities; final selection of loading zones, safety precautions, etc. **The Contractor shall require all pilots that will be used on this project to attend the pre-spray meeting**
- D. **POST-SPRAY MEETING.** At a date, time, and location agreeable to all parties, no later than two (2) weeks after the last day of spraying, representatives of the VDACS will host a post-spray meeting and Contractor(s) shall attend to review the aerial operations and application program.
- E. **MAPS.** The STS Project Supervisor will supply hard copies of treatment maps, intended for spray pilot pre-treatment planning and reference. These maps will show treatment area boundaries and, if applicable, any associated exclusion area(s). All application pilots are responsible and required for the reconnaissance of each assigned treatment area prior to beginning treatment(s) to determine the presence of aerial hazards (see Section X, Item F).
- F. **BLOCK BOUNDARIES.** The block boundaries will be determined with the use of the DGPS guidance system. Where necessary, the VDACS will provide the materials needed for marking the areas to be treated and the personnel to place these markers in the field just prior to spraying.
- G. **DAILY AIRCRAFT RECORD AND OTHER RECORDS.** VDACS will maintain and keep, as the basis for Contractor payment, an accurate record of the insecticide metered into the aircraft and the acreage treated, daily. A copy of the Daily Aircraft Record, signed by the VDACS assigned STS Project Supervisor and the spray pilot, will be provided to the Contractor. The Contractor will not be paid for any insecticide that is applied in unauthorized areas or is jettisoned accidentally or in emergencies. The pilot's signature indicates agreement with the data on the form. Payment will be based upon agreed acreage treated. The Vendor is also responsible for providing a copy of GPS flight files at the close of each working day, and after each load if requested.

- H. **GIS FILES.** Treatment area information, including exclusion areas, will be provided to the contractor by the VDACS STS Project Supervisor, utilizing ArcGIS-Pro Geographical Information System (GIS). The GIS shape files will be transferred to the contractor in order to translate the data, if necessary, into the applicable data format required by the spray aircraft GPS electronic tracking and guidance system.
- I. **NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT.** VDACS will be responsible for preparing Virginia Pesticide Discharge Management Plans (VPDMP) and for submitting annual reports.

VIII. VDACS PERSONNEL

- A. **PROJECT SUPERVISOR:** The Project Supervisor oversees the overall operation of the Virginia STS Project treatment applications. The Project Supervisor will be responsible for:
1. Developing all Air, Safety, and Security Plans;
 2. Serving as the project liaison and conducting any required communications/outreach with the USDA Forest Service, State & Local Governments, Landowners, and the public;
 3. Overseeing and supervising all air and field operations during the project, specifying and approving spray systems, troubleshooting problems with mix and spray systems, monitoring calibration and characterization procedures, analyzing quality control checks, enforcing safety requirements;
 4. Monitoring and verifying calibration of spray aircraft during the spray project;
 5. Developing daily aircraft assignments;
 6. Verifying acceptable spraying conditions;
 7. Conducting quality control checks on the aircraft and application and, when necessary, oversees the corrections made to aircraft spray apparatus or the GPS Tracking and Guidance System by the contractor personnel;
 8. Directing daily assignments of Monitoring Crews for treatment blocks;
 9. Providing briefings to pilots regarding treatment block conditions, safety hazards, and landowner concerns;
 10. Acting as record keeper for all treatment records and is responsible for maintaining records for the amount of chemical mixed, aircraft loaded (kind and identification number), time of aircraft take-off, time of aircraft return, and the block number(s) treated. The mixing and loading records will be submitted at the end of each treatment day;
 11. Organizing and reviewing digital post-treatment files from the spray aircraft;
 12. Serve as Safety Officer, monitoring safety provisions in the spray contract; and make sure that the contractor and the state personnel are following all pertinent aviation and ground personnel safety guidelines. Conducts or assist in conducting safety briefings throughout the project. Reports incidents to through the US Interagency SAFECOM system as needed; and
 13. Investigate any misuse or misapplication of an insecticide, aircraft incidents or accidents, or any insecticide spill.
- B. **MONITORING CREW/GROUND OBSERVERS:** A monitoring crew will consist of one or two VDACS employees to serve as ground observers, equipped with a radio capable of communicating with the Aircraft Dispatcher and the spray aircraft pilot. They will monitor the applications within the treatment blocks and provide weather updates and other pertinent information. The number of crews assigned to an aircraft is dependent upon the size of the aircraft and the scope of the treatment project. These personnel serve as roving crews during spray operations and are responsible for monitoring and recording spray weather, as well as collecting larval and foliage development information in assigned treatment areas. In addition, these crews serve a critical role to advise the spray pilot of changing conditions in the treatment area and to notify the pilot of increased public activity including, but not limited to, schoolchildren assembling for bus pickup and the presence of Unmanned Aerial System (UAS) aircraft.

IX. INSECTICIDES AND ADJUVANTS

- A. **GENERAL.** In general, the awarded Contractor shall abide by all of the following, regarding insecticides used for this project:
1. The Contractor shall follow all label directions and the Virginia Pesticide Control Act and all applicable regulations.
 2. The Contractor shall purchase all insecticide and additives to be used in this project.
 3. The Contractor shall ensure that all equipment which comes into direct contact with the insecticide be thoroughly cleaned and free of residues and foreign particulate matter.
 4. The Contractor shall ensure all spray equipment is cleaned and flushed when switched from one chemical to another.
 5. The Contractor shall ensure that all rinsate and wash water be disposed of in accordance with applicable local, state, and federal laws and regulations.
 6. The Contractor shall ensure that all label-required personal protective equipment (PPE) will be worn while handling insecticide materials.
- B. **INSECTICIDES.** All spraying will be conducted with ***Bacillus thuringiensis subspecies kurstaki (Btk)***. Acceptable formulations for *Btk* are listed below. Section III, Item A provides area and treatment details.
- C. **ACCEPTABLE FORMULATIONS.** The following formulation for *Btk* is labeled and acceptable in forestry applications for Gypsy Moth outlined in this contract:

Foray 48B

1. NOTES ON BTK PRODUCTS: To avoid confusion and to simplify logistics, all BTK insecticide used for treatments in this contract must be from the same manufacturer. All Btk used for this contract must be manufactured within 6 months of the date of its application. Proper documentation of its manufacturing date must be available for review at the start of the project.
2. BTK PURCHASING: For information on purchasing *Btk* insecticide product Foray 48B, contact the following:

Product Information Source
Foray 48B
Jacques Dugal
Forestry Sales Manager
Valent BioSciences
870 Technology Way, Suite 100
Libertyville, IL 60048
Phone: (418) 839-6665
Mobile: (418) 261-0823
Jacques.Dugal@valentbiosciences.com

- D. **PURCHASE, STORAGE, AND TRANSPORTATION.** The awarded Contractor will be responsible for the purchase of the undiluted *Btk* insecticide used on this project in sufficient quantities to meet the contract requirements. The awarded Contractor will pay all applicable sales and use taxes and is responsible for arranging for the delivery of the product with both the manufacturer and a suitable storage site where it will be secured and protected. Seventy-five percent (75%) of the insecticide shall be on hand prior to the start of the project with the balance delivered by May 1, 2021. Upon delivery to the site, the Contractor must provide the VDACS with the number of containers and the batch numbers. Samples may be taken by the VDACS to be analyzed. The Contractor must assure that an adequate supply of the insecticide is strategically located in or near the project area at least 24 hours prior to the start of spraying, in order to

ensure efficient operation. The Contractor must notify VDACS of these locations. The Contractor shall be responsible for handling and transporting the insecticide from the storage site to the aircraft-loading zone and for providing security of the insecticide.

- E. ***LABEL AND SAFETY DATA SHEETS (SDS).*** The awarded Contractor must keep a copy of the label and Safety Data Sheets (SDS) available (on site) throughout the course of the project for any insecticide and/or chemical supplied by the Contractor.
- F. ***CONTAINER DISPOSAL.*** The awarded Contractor is responsible for the proper disposal of all empty insecticide and adjuvant containers according to label requirements and all state and federal laws and regulations.
- G. ***APPLICATIONS/RATES/SPRAY VOLUME.*** Specifics on the number of applications per treatment block, application rates, and required spray volume are given in Section III, Item A, 1-3.

X. APPLICATION SPECIFICATIONS, CONDITIONS, AND RESTRICTIONS

- A. ***OPERATIONS.*** All operations will conform to Federal Aviation Administration (FAA) requirements, manufacturer's pesticide label instructions, Virginia Department of Transportation (VDOT) policies and the appropriate state requirements for storage, transportation, loading and application of insecticides. The contractor will be responsible for notifying FAA, Military, and local air-traffic-control centers as needed on a daily basis during operations.
- B. ***SAFETY.*** VDACS and Contractor personnel are required to conduct themselves in a safe manner at all times. The VDACS and Contractor will prepare detailed safety plans that will be reviewed by and distributed to all involved VDACS and Contractor personnel, prior to the start of the spraying operations.

Caution must be exercised during spraying because of the frequent flight operations directly over residential areas. In addition, some of the terrain may be mountainous and irregular, and elevations up to 4,500 feet above mean sea level may be encountered.

- C. ***LOGISTICS.*** Once on site, each aircraft and its assigned pilot, ground-support equipment, and crew will be under the logistical direction of the STS Project Supervisor. Although an effort will be made to distribute the workload equitably among all the aircraft assigned, such a distribution is not guaranteed.
- D. ***WEATHER RESTRICTIONS.*** Using the following guidelines, the VDACS will determine when weather conditions are acceptable for spraying operations to be conducted. Information supplied by the VDACS's field personnel located in or near the treatment area, and the Contractor's pilot will be used in making this decision. In addition, the following weather conditions will be used as guides of when the treatment blocks can be sprayed:
 - 1. **WIND VELOCITY:** Wind velocity should be 10 mph or less when measured in or near the spray block with a hand-held wind gauge. If excessive drifting of the spray cloud occurs, the current spray operations may be suspended by the STS Project Supervisor. Caution must also be exercised when dead calm conditions exist because of the formation of temperature-inversion layers. Under such conditions, the smaller droplets in the spray cloud will remain suspended and will not settle into the forest canopy. Spray operations must be curtailed until such conditions subside.
 - 2. **PROBABILITY OF PRECIPITATION:** Probability of precipitation within six hours after the completion of spraying must be 50 percent or less. This probability of precipitation is provided by Flight Service Weather (1-800-992-7433), National Weather Service (use

closest local source), or other contracted weather forecasting source. Consult with the insecticide manufacturer regarding appropriate spray deposit drying time.

3. **AIR TEMPERATURE AND RELATIVE HUMIDITY:** When applying **Btk** products, the Contractor shall refer to the temperature and humidity chart provided by Valent BioSciences. Bidders are responsible for obtaining and reviewing the Foray Technical Manual from Valent BioSciences. VDACS will monitor and ensure that temperatures and relative humidity conditions are such that proper insecticide application can be performed and will make decisions based on the temperature and relative humidity.
 4. **WET FOLIAGE:** Foliage must not be dripping wet from either precipitation or overnight dew.
- E. **ACCURACY.** The Contractor must be able to produce a complete and accurate log showing treatment coverage of the designated areas within the spray block, as documented by GPS tracking and guidance flight logs. If any designated area is missed or improperly treated, it must be resprayed at the Contractor's expense.
- Care must be exercised in ensuring that all insecticides are deposited within the designated block boundaries and away from areas indicated as sensitive and/or where property owners object to the spraying and have been excluded from treatment. Within the designated block boundaries, the spray is to be applied to forested areas only and booms shall be shut off over all open bodies of water.
- The contractor shall treat forested areas within the spray block in accordance with label specifications. Open areas without trees will not be treated. The VDACS may create associated exclusion areas for treatment areas that contain open water or designated non-forested areas based on department criteria. All areas within the treatment area boundary must be sprayed unless bounded by an exclusion area or restricted by label requirements. Exclusion areas will be incorporated into the GIS based digital treatment file that is delivered to the contractor.
- Congregations of people shall be avoided at all times.
- F. **RECONNAISSANCE.** The VDACS requires a reconnaissance flight by the spray pilot over each spray block prior to treatment to ascertain the block layout and to identify and avoid any flight hazards or congregations of people. **Reconnaissance flights are to be provided at no extra charge by the Contractor.** If the spray pilot has difficulty in conducting adequate reconnaissance flights and/or in orienting with the spray blocks, the Contractor will be required to supply an observation aircraft with pilot. **Pilots are responsible for communication and must conduct operations under the FARs with the appropriate air traffic control agency or military controlled air space for the type of air space overlying treatment areas.**
- G. **FERRY FLIGHTS.** Ferry flights to and from the work sites or between loading zones in the project area are to be provided by the Contractor and will not be billed to the VDACS. This airtime must be limited to flights that are essential; ferry flights must be avoided over sensitive areas, and in or near objector locations.
- H. **SPRAY TIME POLICY.** Because of the short spray window available, it is essential that advantage be taken of any acceptable spray weather within the limits imposed by insect development, pilot work-hour limits, certain time-of-spray restrictions, and safety considerations. Therefore, spraying may take place whenever weather conditions permit, including weekends and holidays.

- I. **TIME-OF-SPRAY RESTRICTIONS.** Spraying must be curtailed at certain times in certain situations to avoid potential conflicts with land users. The following are instances when spraying activities will be curtailed:
1. Spraying is not permitted in state, federal, or other parks and/or campgrounds from noon on Friday through Sunday or from noon the day preceding a holiday through the holiday unless special arrangements have been made with the park manager. These special arrangements must include a written waiver signed by the park manager attesting that persons utilizing that area are not being exposed to insecticide treatment against their will or without their knowledge.
 2. Evening spraying (1 p.m. until dusk) on Saturday, Sunday, or a holiday must be restricted to State lands other land ownerships where potential land user conflicts would be minimal.
 3. No spraying may be conducted over school buses while they are actively picking up or discharging students or over any group of schoolchildren or other persons congregated within the spray block.

This list is not exhaustive.

- J. **EVENING SPRAYING.** The primary productive spray time is in the early morning. However, evening spraying is available and permitted when the weather report is favorable and where a few hours would be helpful in keeping on schedule. Evening spraying is the biggest single factor that leads to fatigue for everyone working on the program. For these reasons, evening operations should not be automatically included in the daily spray schedule. Evening spraying shall be considered only when it is essential to finish up the spray project in an area.

If evening spray operations are conducted, they may be curtailed when VDACS determines that fatigue is excessive.

- K. **AIRSPEED.** An exact application airspeed will be designated by the pilot at the time of calibration verification. Application of insecticides must be applied at the calibrated airspeed.
- L. **APPLICATION ALTITUDE.** Spray application(s) shall be released 50-100 feet above the canopy of the target, except where obstruction in or adjacent to the target would endanger the safety of the pilot while applying pesticides at that altitude. **Spray pilots must spray between 50-100 feet above tree canopy.**
- M. **TURNS.** The aircraft spray boom shall be shut off at the end of spray runs and during turns. Turns must be avoided over sensitive areas, including properties where the owners have objected to spraying.

XI. AIRCRAFT, SPRAY SYSTEM, NAVIGATION,

- A. **AIRCRAFT.** The Contractor shall furnish all aircraft for this spray project. Further specifications through this section will detail the aircraft licensing, spray equipment, aircraft specifications, auxiliary equipment, and other items as it pertains to allowable aircraft for this contract.
1. **AIRCRAFT DESCRIPTIONS.** The Contractor must complete and submit to the STS Project Supervisor an Aircraft Description Form for each spray aircraft, alternate spray aircraft, and auxiliary aircraft slated for use on the contract. **This information is required to be submitted with the bid (see Attachment B).**
 2. **AIRCRAFT CATEGORIES.** The allowable categories of aircraft required for this project are given in Attachment D. Aircraft in a larger-size category as listed may be substituted with the prior, written approval of the VDACS. Specifics on the aircraft slated for the

contract must be provided to the VDACS as indicated in Section XI, Item B. Because of logistical planning by the VDACS, the Contractor is not permitted to substitute aircraft, unless approved by VDACS.

3. **LICENSES.** Every aircraft furnished for this contract must be properly licensed and airworthy under regulations of the Federal Aviation Regulations for commercial operations. Aircraft must be maintained in accordance with 14 CFR Part 137.31.
4. **CONDITION.** Each aircraft should be clean inside and outside and must fully comply with FAA directives and specifications and to any pertinent laws and regulations of the Commonwealth of Virginia.
5. **SAFETY.** Safety regulations prescribed by the FAA, the manufacturer of the aircraft, the Contractor, and VDACS must be observed at all times. All Contractor-supplied aircraft must contain FAA-approved shoulder harnesses and lap belts for the pilot and front crew/passenger and lap belts for all rear seats.
6. **EQUIPMENT.** All equipment specified in these Contract Specifications for use in or upon any aircraft must be FAA approved or the Contractor must have an FAA field approval (FAA Form 337) from the FAA Flight Safety District Office serving the Contractor's home base of operations.
7. **ADDITIONAL AIRCRAFT EQUIPMENT REQUIREMENTS.** The Contractor shall also ensure that Aircraft used in this project also have the following:
 - a. Fire Extinguisher(s). As required by 14 CFR 137, fire extinguisher supplied shall be a hand-held bottle with a minimum 2-B:C rating, mounted and accessible to the flight crew. The Contractor is responsible for ensuring all company personnel are trained in the correct use of these fire extinguishers.
 - b. A flight meter or recording tachometer displaying actual flight time in hours and tenths.
 - c. A variety of avionics.
 - d. First aid kit.
 - e. DGPS navigation system.
 - f. Automated flight following equipment.
 - g. Aircraft Spray System.
8. **MAINTENANCE.** Aircraft shall be operated and maintained in accordance with 14 CFR requirements and manufacturers' recommendations. Compliance with mandatory manufacturers' bulletins, FAA ADs, and the correction of maintenance deficiencies shall be accomplished prior to the start and during the period of Contract performance.
9. **AIRCRAFT REPAIRS.** In the event that any aircraft under contract becomes non-airworthy, it must be repaired within 24 hours of the original breakdown. If the aircraft cannot be repaired and returned safely to full operation, it must be replaced with an aircraft of similar capabilities subject to all of the provisions of these Contract Specifications within 48 hours. The Contractor must submit their Aircraft and Pilot Replacement Plan as outlined in Section V, Item N which identifies how the Contractor will meet the deadlines for repairs or replacement.
10. **ENGINES.** Each aircraft engine must meet manufacturer's specifications for airworthiness. Engine and airframe logs must be present at time of pre-work briefing.
11. **RESERVE FUEL.** A minimum 30-minute reserve fuel supply over the amount needed for the planned round trip is required for each flight.

12. **AIRCRAFT REFUELING.** Any refueling of the aircraft done while the engine is running and/or the rotor spinning must be done by hose line and nozzle only. Fueling from containers will be permitted only during complete engine shutdown. Proper aircraft/fuel truck bonding procedures as approved by the National Fire Protection Association must be followed while refueling.
 13. **LOADING.** The pilot is responsible for the proper loading of the aircraft. Loading is under the pilot's direction and must be inspected by the pilot before takeoff. The weight must not exceed the maximum gross weight specified by the aircraft manufacturer. The pilot must compensate for altitude, temperature, landing zone conditions, and any adverse flying conditions.
 14. **VISIBILITY.** The aircraft windshield or bubble must be kept clean prior to and during spray operations.
 15. **AUTOMATED FLIGHT FOLLOWING (AFF).** Application aircraft will be equipment with Automated Flight Following equipment.
 16. **AIRCRAFT SUBSTITUTION.** The Contractor is permitted to substitute designated aircraft with aircraft in the same or larger category no more than three (3) weeks prior to the start of a project and only upon VDACS' prior approval, provided all applicable specifications and insurance requirements for the substituted aircraft are met at the time of substitution.
- B. **AIRCRAFT SPRAY SYSTEM.** The following items outline the general specifications required for aircraft spray systems to be used in this project as a part of this contract:
1. **TANKS.** Leak-proof, corrosion-resistant tanks with exterior filler openings shall be used. The location and size of tanks must be so as to not impair airworthiness by overloading or displacing the center of gravity beyond acceptable limits. Filler openings or necks must be large enough to prevent surging during filling. Tanks must be vented to the outside of the fuselage.
 2. **EMERGENCY DUMP SYSTEM.** Each aircraft must be equipped with an emergency jettisonable load-dumping system or emergency non-leaking dump valves of adequate capacity and adequately vented to dump the load and installed so as to prevent blowback into the fuselage. In no case must the ratio between gallons carried and the surface area of the dump-valve opening as measured in square inches be greater than 7.65 to 1. Exposed valve-control linkage must be protected to prevent unintentional opening of the valve in any manner. The control lever must be substantially mounted in the cockpit within easy reach of the pilot when properly wearing the shoulder harness.
 3. **PUMPING SYSTEM.** The pumping system must be securely attached and capable of maintaining the pressure required to insure the even distribution of the insecticide. All plumbing and pumps must be large enough to handle the required flow. All parts, including pump seals, must be chemically and abrasively resistant to the spray material being used.
 4. **PRESSURE GUAGE.** An accurate liquid-filled spray pressure gauge must be located so that the pilot can easily read it.
 5. **SHUTOFF.** To avoid contamination of areas not scheduled for treatment, the entire spray system must be leak-proof and have a positive shutoff mechanism capable of eliminating dripping from the nozzles when shut off.

6. **SYSTEM CLEANING.** The aircraft spray system, including tanks, must be cleaned of all foreign material and flushed with water prior to the start of the spray operation. The spray system must be flushed following spraying on a daily basis to prevent drying of spray material from becoming a problem. The Contractor must daily clean all screens, check for leaks and clogs, verify pump pressure, and monitor flow rate. During the spray project the spray system must be flushed with water if a switch between insecticides is made.
7. **STRAINER.** Each aircraft must be equipped with an in-line strainer (no finer than 30 mesh) to filter all material before it enters the spray boom.
8. **SPRAY TIMER.** Each aircraft must be equipped with an electronic flow- metering system, such as a CropHawk®, that is activated automatically when the spray switch is operated.

The system must be capable of providing an accurate measurement of the cumulative spray time in minutes and tenths or minutes and seconds as well as an accurate measurement of the volume of spray material dispensed.

9. **BOOM SYSTEM.** Each aircraft must be equipped with an FAA-approved boom system of the type most commonly employed for the delivery system being used. This system must have:
 - a. Nozzles located to minimize the spraying of insecticide onto any part of the ship's structure.
 - b. All nozzles rigidly attached to the boom without flexible dropper hoses.
 - c. Bleeder lines installed at the ends of the boom feeding back to the outboard nozzle if that nozzle is installed more than five inches from the boom end.
 10. **PUMP PRESSURE.** The pump must have an effective operating pressure range of 20-50 PSI.
 11. **AUTOMATIC ON/OFF FOR SPRAY BOOM.** The aircraft spray system must be equipped with an automatic on/off of spray boom that is controlled by the aircraft's GPS guidance system. The ability to manually over-ride the automatic on/off system must be available.
 12. **AUTOMATIC FLOW CONTROL.** The aircraft spray system must be equipped with automatic flow control that is controlled by the aircraft's GPS guidance system.
- C. **NOZZLES.** Approved rotary atomizers (4-8 units per aircraft) are required for spray aircraft. The nozzle systems must meet the following specifications:

ROTARY ATOMIZERS must have the following criteria:

- a. **TYPE.** Micronair®, Beecomist®, or similar VDACS approved rotary atomizers are acceptable provided that the units have the capability of adjusting the screen rotation speed in order to change the droplet size. All rotary atomizers on an aircraft must be of the same type.
- b. **NUMBER AND SIZE.** Sufficient numbers of the proper size and type rotary atomizer must be provided for the particular aircraft being utilized in order to produce a uniformly dispersed spray cloud with a droplet volume median diameter (VMD) of 100-125 microns for Foray 48B.
- c. **INSTALLATION/ADJUSTMENT/CALLIBRATION.** The installation, adjustment, and calibration of the rotary atomizers, must be made in strict accordance with the manufacturer's recommendations to permit the application of the specified spray volume per acre. The flow rate for each individual rotary atomizer installed on a boom must not deviate ± 10 percent from the average flow rate for all rotary atomizers installed on the boom. Any rotary atomizer that deviates by more than ± 10

percent must be replaced. All units must be properly cleaned and serviced and be in good working condition when reporting on-site for calibration verification.

- D. **CALIBRATION/CHARACTERIZATION.** The Contractor's spray aircraft must arrive on site properly calibrated for the insecticide and rate of application specified. The Department will verify the calibration by checking the flow rate of each aircraft prior to the start of the operation. If the calibration is incorrect, the Contractor must correct it immediately without causing any delay in the start of operations. Dependent upon the delivery system and the application rate of the insecticide being used, calibration verification will be made using either water or the insecticide slated for application. The flow rate from the spray system will be monitored periodically during the spray operation and must be maintained within ± 5 percent of the desired flow rate.

E. **ELECTRONIC RADIO, DGPS, AND COMMUNICATIONS EQUIPMENT.**

1. **EQUIPMENT.** All spray aircraft must be equipped with electronic communications and guidance equipment as described herein. The Contractor's project supervisor must also be supplied by the Contractor with a programmable portable or vehicle installed radio which meets the same specifications as given. All Contractor-furnished communications and guidance equipment for use in aircraft must be of types currently approved by the FCC and the FAA. Contractor will provide portable radios to VDACS ground staff as needed to monitor spray operations. The aircraft must be bonded and shielded so as to allow optimum radio communications. The following are required for all spray and auxiliary aircraft.

- a. **VHF COMMUNICATIONS.** The Contractor is expected to equip each spray and auxiliary aircraft with panel mounted VHF-Am (VHF-1) aeronautical transceivers with a minimum of 760 channels covering 118.000 to 136.975 MHz. Each transceiver should have channels selectable in no greater than 25 kHz increments and a minimum of 5 watts carrier output power. The transceiver's operational controls must be mounted so they are readily visible and accessible to the pilot. The Contractor will provide VDACS with the VHF frequency used by the spray pilot.

The receiver for the VHF communications system should not be part of a navigational system.

Each ground-support crew must be equipped with a mobile or portable VHF transmitter/receiver that will permit communication with the spray and/or auxiliary aircraft.

- b. **FM RADIO.** Each spray and auxiliary aircraft is expected to be equipped by the Contractor with a field-programmable, rack-installed or portable FM radio transmitter-receiver (10 watts output with a range of 150.0 MHz to 174.0 MHz), compatible externally mounted antenna designed for aircraft use, and a compatible crash helmet microphone/headset assembly for the pilot and each operating crewmember (microphone/headset assembly required for auxiliary aircraft pilot and crewmembers--helmet optional).
- c. **SELECTOR SWITCH.** Each spray and auxiliary aircraft should be equipped with a three-position selector switch that permits the pilot to simultaneously monitor both the VHF and FM systems in one position, monitor and transmit on the VHF system in another position, and monitor and transmit on the FM system in a third position.
- d. **GPS.** Each spray aircraft must have a permanently installed, panel mounted GPS utilizing an approved fixed external aircraft antenna and powered by the aircraft electrical system or an aviation portable GPS unit provided the portable unit is securely mounted, is equipped with a remote antenna, and presents information

from an overhead orientation (not a drive-along-the-road-type), and is powered by the aircraft electrical system. The GPS must utilize the WGS-84 datum and reference latitude and longitude coordinates in the degrees/minutes/decimal minutes (DM) mode for aircraft positioning.

- e. **TRANSPONDER.** Each spray and auxiliary aircraft must have one air traffic control (ATC) transponder and altitude reporting system meeting the requirements of 14 CFR Part 91.215 (a) and (b).
 - f. **EMERGENCY LOCATOR TRANSMITTERS (ELT).** One automatic-portable/automatic-fixed or automatic-fixed ELT, certified to either Technical Standard Order (TSO)-C91a or TSO-C126, utilizing an external antenna and meeting the same requirements as those detailed for airplanes in 14 CFR Part 91.207 (excluding section f.). The ELT must be installed in conspicuous or marked location, with the required battery expiration date marking located in such a manner that is easily legible without de-mounting the ELT.
- 2. **RADIO PROGRAMMING.** The Contractor's pilots must be trained in programming the radio provided and must be capable of programming it in the field. Testing of radios will be conducted during calibration prior to spray operations.
 - 3. **MAINTENANCE.** The Contractor must provide evidence, when requested by VDACS, that the communication and guidance equipment furnished has been serviced, as required, by a qualified electronics maintenance shop. It is the responsibility of the Contractor to maintain in good working order all communications and guidance equipment it is required to furnish.
- F. **NAVIGATIONAL AIDS.** All aircraft will be equipped with a working navigation/tracking, differentially corrected, global positioning system (DGPS). The pilot must have a working knowledge of the DGPS system installed in the aircraft being operated. The VDACS is responsible for determining and, if necessary, editing the treatment area boundaries of all scheduled treatment areas and their associated exclusions, by utilizing GIS. The contractor is responsible for transferring the GIS data created by Department personnel into the digital file format required by use of the contractor's installed DGPS. In addition, the contractor is responsible for uploading the data into the application aircraft's DGPS. Each day after spraying is completed, the recorded flight files will be downloaded for analysis for the Department.
- 1. Aircraft DGPS Specifications. Certain electronic guidance systems may not meet program requirements. Guidance systems that meet the following criteria are acceptable:
 - a. Contractor should provide DGPS system with software designed for parallel offset in increments equal to the assigned swath width of the application aircraft. A course deviation indicator (CDI) or a course deviation light bar should be installed on the aircraft and located in a position that will allow the pilot to view the indicator with direct or peripheral vision. Differential correction should be provided by satellite using L-band frequencies.
 - b. The guidance system being used will allow the flight log to be downloaded to an on-site computer for post-flight analysis and review. The flight log must show the entire flight of the aircraft from takeoff to landing and differentiate between spray on and spray off when viewed on the computer monitor. The software should have the capability to zoom to any portion of the flight for viewing in greater detail and a method to determine distance between each flight lane. The system should be able to calculate and show total acres treated during the flight. The software should be compatible with color printers and differentiate between spray on and spray off on the printed copy.

- c. The DGPS (*make and model, e.g. Satloc or AgNav or other*) proposed must have been operated successfully in a similar type aerial application program, and demonstrated success prior to the last 12 months. Provide upon request the name and phone number of previous clients or other users of the system who can validate the DGPS capabilities.
- d. Pilot proficiency or evidence of prior experience with the proposed DGPS system must be demonstrated to the VDACS upon request. To demonstrate proficiency the contractor may be requested to provide a copy of data (printed map and original electronic format) downloaded from DGPS proposed for use which was 1) conducted in the same type aircraft proposed for the use on this project, 2) flown in similar topography and aircraft altitude (generally below 200 feet AGL), and 3) collected within the last 12 months. The printed map shall display the spray block boundary, the flight path of the aircraft, clearly differentiate between spray on, and spray off.
- e. If at any time the DGPS is not working properly, the pilot must report this to the Contractor Program Supervisor and the STS Project Supervisor. If the DGPS is not working properly during application, the pilot will be required to return immediately to the airport.

2. Electronic Guidance and Support Furnished by the Contractor.

- a. Contractor shall provide all guidance equipment, materials, computers, printers, personnel, and services required for the system. The guidance equipment shall be capable of accurately guiding the aircraft, while flying at application altitude, along parallel flight lines equal to the assigned swath width of the application aircraft, in blocks designated by the VDACS. The system shall be sufficiently sensitive to provide immediate deviation indications and sufficiently accurate to keep the aircraft on the desired flight path. The guidance system should be capable of updating current position at a minimum rate of five (5) times per second.
- b. During operation, differentially corrected signal should be accurately recorded at least 95% of the operational time.
- c. Contractor shall provide a post-flight processing computer and software capable of displaying track, altitude and groundspeed of aircraft during flight, with differentiation between standard flight and flight when the application system is on. Export file format must be compatible with Arc View/ArcGIS Pro GIS systems or translatable to ArcView/ArcGIS Pro systems and must be on a VDACS approved data storage media device.

3. Salient characteristics required for the DGPS system. The equipment offered must possess the following features:

- a. Precision DGPS guidance with pilot-selected cross-track error readout adjustable to one (1) foot.
- b. Easy to operate, user-friendly pilot's control keypad, with swath advance and decrement function.
- c. Visual display monitor: 1) capable of displaying swath width over flight path; 2) mounted in the aircraft in a location that will allow the pilot to view the screen with

direct or peripheral vision without looking down; 3) shall display in real time or be available for in-flight access immediately after application has ceased.

- d. Shall have variable swath width entry.
- e. Record logging of application at a minimum rate of one-second intervals. Full record includes position, time, altitude, speed, cross-track error, track, application system on/off; aircraft tail number, pilot, job name or number, and differential correction status.
- f. System memory capable of storing up to 8 hours of continuous flight log data.
- g. Capability to accept pre-loaded reference waypoints (A-B Line). Must be able to store and retrieve, in-cockpit, at least 50 individual treatment blocks, each containing up to 50 points. Capability to link blocks together for combined treatment.
- h. Feature which alerts pilot when he/she is about to enter or exit a specific treatment block or an exclusion area within a block. A method to display nested polygons to indicated sensitive, or no-spray areas within treatment blocks.
- i. A course deviation indicator (CDI) or light bar which displays both cross-track error and intercept angle to desired heading must be installed on the aircraft in a location that will allow the pilot to view the indicator with direct or peripheral vision (heads up display).
- j. HOME navigational feature that provides instant range and bearing to home base airport or heli-base.
- k. MARK feature which allows return to point in any swath before or after equipment shutdown.
- l. Warning method to indicate DGPS or Differential Correction failures.
- m. Pilot-adjustable intensity lighting for light bar, keypad, and moving map display.
- n. Capability to end log files, rename, and start new logs in flight.

~~G.~~ **AUTOMATED FLIGHT FOLLOWING.** All spray aircraft must be supplied with an automated flight following (AFF) system. If the Contractor supplies the AFF system, see **Appendix B** for specifications.

XII. GROUND SUPPORT EQUIPMENT.

- A. **INSPECTION.** Upon request, the Contractor must supply the VDACS with specifics on the ground-support equipment the Contractor will provide. The Contractor should not substitute ground-support equipment, without prior approval from VDACS. Any substitutions before that date must be with ground-support equipment of similar or greater capability. VDACS personnel may inspect this equipment and, at the Contractor's expense, conduct performance tests, as necessary, at a mutually agreed-upon site 60 days or less prior to the start of spraying operations.
- B. **ACCESSORY EQUIPMENT.** All accessory equipment, including any vehicles necessary for transporting the insecticide from storage or from one operational site to another, is the responsibility of the Contractor. Accessory equipment supplied by the Contractor includes, but is

not limited to, trucks, insecticide storage and/or mixing tanks (equipped for agitation and recirculation), pumps, hoses, metering devices, spill containment materials, and similar equipment necessary for handling the insecticide and loading the spray aircraft. The Contractor must also supply readily accessible and properly sized and coded fire extinguishers at each loading zone.

If required by contract logistics, the Contractor must supply sufficient accessory equipment so that each aircraft can work independently of each other.

- C. **EQUIPMENT CLEANING.** All equipment which comes in direct contact with the insecticide must be kept thoroughly clean and free of residues and foreign particulate matter.

D. **FIELD TRUCKS.**

1. **LIGHT-DUTY TRUCK.** The Contractor must supply a vehicle for each ground crew to use for transporting its personnel, moving insecticides, running for parts, and similar duties. If the Contractor-provided nurse truck is unsuitable for conducting these errands in an expeditious manner, the Contractor must provide a pickup truck or other acceptable vehicle. VDACS owned vehicles may not be used for these purposes.
2. **NURSE TRUCKS.** A truck or trucks equipped for transporting insecticide are required for each independently working spray aircraft or a group of spray aircraft working from a single loading zone. Truck and trailer combinations are acceptable if they meet all requirements of the Virginia Department of Transportation (VDOT), do not exceed local road and bridge weight limits, and do not present maneuverability problems at the designated field worksites. Each independently working spray aircraft or group of spray aircraft working from a single loading zone must have sufficient ground-support equipment and personnel to adequately service it/them without causing any production delays.

The field truck or trucks supplying each aircraft must be designed to separately carry the insecticide concentrate, water, additives, and aircraft fuel to the worksite. The quantities transported to the worksite must be sufficient to supply aircraft working from that site for five hours of spraying without exceeding the truck or road legal weight limits.

All trucks transporting aircraft fuel or other hazardous materials must be placarded and supplied with shipping papers as required under the U.S. Department of Transportation's Hazardous Materials Regulations (HAZMAT).

Each mix truck must be supplied with drum wrenches if barrels are being used.

- E. **TANK FARM.** If working from a limited number of loading zones, the Contractor may, in-lieu of the nurse trucks specified, set up a tank farm, subject to all of the equipment specifications contained in Section 11, at each loading zone selected for the project area. This tank farm must be of sufficient capacity to supply and service all spray aircraft working from the loading zone. Sufficient equipment must be supplied so that each loading zone will be set up and operational far enough in advance of need so that no operational spraying time will be lost by any spray aircraft. If required by contract logistics, sufficient equipment must be provided so that each aircraft can be stationed and/or worked independently of each other.
- F. **FUEL TRUCKS.** The Contractor must supply all fuel and lubricating oils required to operate all equipment during the contract period. All fuels must be commercial (or military) grade aviation fuel approved for use by the airframe and engine manufacturer. Only fuels meeting American Society of Testing and Material (ASTM) or Military specifications are authorized for use. **Smoking is prohibited within 50 feet of the aircraft and fuel servicing vehicles. All fuel operations**

are to be conducted in a secure area without presenting undue hazards to other aircraft or personnel. VDACS reserves the right to inspect all fuel tank equipment to ensure safe operation.

1. The Contractor must ensure that they are in compliance with 40 CFR Part 112: Oil Pollution Prevention: Spill Prevention, Control, and Counter measure Plan Requirements (SPCC). An SPCC plan is required for each mobile fueler used on this contract regardless of tank size.
2. Each aircraft fuel servicing vehicle should have two fire extinguishers, each having a rating of at least 20-B:C.
3. Fuel trucks shall be properly maintained, clean and reliable. Tanks, pumping, filters, and other required equipment shall be free of rust, dirt, and other contaminants.
4. The Fuel Truck(s) should be capable of transporting sufficient fuel to operate the application aircraft for a minimum of 8 hours.
5. The Fuel Truck(s) manufacturer's gross vehicle weights (GVW) shall not be exceeded. Barrels are not acceptable fuel containers.
6. The filtering system should be equipped with a differential pressure monitoring system or fueling systems with which the pump produces more than 25 psi. Spare filters, fuses, seals, and other components on the fuel truck filtering system shall be stored in a clean, dry area. A minimum of one set is required.
7. All tanks shall be securely fastened to the truck bed and shall have a sump or sediment settling area of adequate capacity to provide uncontaminated fuel to the filter.
8. All hoses shall be properly secured and safeguarded when not in use. Only hoses designated for dispensing of fuel will be used. Hoses should be at least 50 feet in length. Fuel nozzle should include a 100 mesh or finer screen, a dust protective device and a bonding clip or plug.
9. Fuel Truck(s) should have adequate bonding cables and shall be utilized in accordance with National Fire Protection Association (NFPA) Manual 407.
10. Markings: "NO SMOKING" signs with legibly printed letters visible for both sides and rear of the truck. Each fuel-servicing vehicle shall be conspicuously and legibly marked to indicate the nature of the fuel. Fuel truck(s) must be placarded in accordance with 49 CFR 172.

G. **TANKS.**

1. **GENERAL.** All tanks used to transport insecticides must be leak-proof and corrosion resistant. Filler openings and air vents must be adequate to prevent surging during filling. All tanks must be equipped with properly fitting covers or hatch plates that must be kept closed except when filling or circulating to reduce the change of contamination with foreign materials. All covers and hatches should be secured during off-duty hours.
2. **CLEANING.** All tanks must be thoroughly cleaned and free of rust, residues, and particulate matter, such as grit and sand. The VDACS should inspect all tanks before they are filled with insecticide or water.

H. **PUMPS.**

1. **WATER PUMP.** Each truck used to transport water should be equipped with a pump capable of drafting water a vertical distance of at least ten (10) feet. The truck should be equipped with a non-collapsing suction hose, an anti-siphon device or check valve, a coarse screen, and a bucket. The configuration must be such that water being taken into the truck can be metered if needed, and it must pass through a strainer no coarser than 50 mesh.

2. **CIRCULATION PUMP.** The pump used for circulation and loading should produce a sufficient flow rate to fill the aircraft in a maximum of three minutes without producing high pressures.
3. **INSECTICIDE PUMP.** The pump used for drafting the undiluted insecticide from a 55-gallon drum should be capable of repeatedly emptying a drum in less than three minutes.
4. **NUMBER OF PUMPS.** The same pump may be used for all purposes if a single truck is used for mixing and for transporting water and insecticide, provided all requirements are met. If a separate truck is used for any of these purposes, it must have its own pump.
5. **PUMP SEALS.** All pump seals must be chemically and abrasively resistant to the spray material being used (tungsten carbide or silicon carbide components are suggested).
6. **PROHIBITED PUMPS.** No high-pressure piston pumps or hand pumps are permitted.

I. **METERS.**

1. **GENERAL.** The insecticide-handling system must be designed to accurately meter water and insecticide concentrate. If the system or insecticide storage system is designed such that air could be sucked into the lines and cause erroneous meter readings, the meter must be equipped with an air eliminator.

A strainer no finer than 30 mesh shall be installed in line to screen the solution prior to entering the meter. The meter must be capable of safely handling the flow rate necessary for loading the aircraft. Meters with lighted digital displays shall be shaded so that they are not difficult to see in direct full sunlight

2. **CALIBRATION.** The Contractor must provide evidence that all metering devices employed have been inspected and calibrated by a licensed inspector upon request from VDACS. At or before the time the Contractor's aircraft are calibrated, the Contractor must supply the VDACS with a copy of the inspector's calibration report for each meter used in the project, upon request.

All meters used to measure the volume of insecticide at any time during the operation must be calibrated and certified using the insecticide formulation to be used on the project or the meter must be calibrated and certified as capable of accurately measuring various materials, each with a different viscosity without being recalibrated for each material. If the meters are calibrated with water, the contractor will provide VDACS with appropriate conversion factors for the spray material.

XIII. **SAFETY REQUIREMENTS**

- A. **GENERAL REQUIREMENTS:** All personnel involved in the spray operation are required to conduct themselves in a safe manner, especially in the vicinity of any operating aircraft and support equipment. Only essential personnel will be allowed around the aircraft during the loading and refueling period. Safety regulations prescribed by the FAA, the Pesticide Control Act, the manufacturer of the aircraft, the Contractor, and the VDACS will be observed by all personnel at all times. The STS Project Supervisor has the authority to stop any operation if in his opinion there is eminent danger to any person or property.
- B. **INSECTICIDE HANDLING:** The Contractor will ensure all label requirements regarding mixing, loading and disposal are correctly followed.

- C. **FIRE EXTINGUISHER:** The Contractor will supply approved fire extinguishers of sufficient size and quantity to handle emergencies normally associated with this type of spray operation.
- D. **SAFETY EQUIPMENT:** The Contractor will supply all safety equipment required for mixing and loading the insecticide material. This includes but is not limited to gloves, respirators, signs, etc. The Contractor must also provide containment materials and supplies.

XIV. ADDITIONAL CONDITIONS

- A. **PERSONNEL:** VDACS will furnish state personnel to supervise and direct the spray operation. The Program Coordinator is the Program Manager of the Office of Plant Industry Services in the Virginia Department of Agriculture and Consumer Services, or his designated representative. The Program Coordinator's responsibilities include: 1) ensuring contract compliance; 2) settling minor contractual disputes, and 3) maintaining overall authority to terminate daily treatment.
- B. **COLLATERAL CONTRACTS:** Contractor may be permitted to perform other spraying operations for another firm or individual, provided prior written permission is received from VDACS. Contractor must return to resume treatments upon 24 hours' notice from VDACS. Contractor will be required to recalibrate equipment upon return. Upon completion of the contracted work, aircraft will be released by approval from the STS Project Supervisor.
- C. **TAXES:** Aircraft required to be licensed for use in the Commonwealth of Virginia are subject to a Virginia aircraft sales & use tax of 2% based upon the sale price or fair market value of the aircraft whichever is applicable. If a similar sales tax has been paid to another state, credit will be allowed if confirmation is provided. Aircraft leased, rented, or chartered are subject to these same regulations. Any required taxes must be paid before a Virginia Commercial Aircraft License can be issued. Additional information on this requirement can be obtained by contacting the Virginia Department of Taxation, P. O. Box 1115, Richmond, Virginia, 23218-1115, Telephone: 804-786-2450.
- D. **IRS FORM SUBSTITUTE FORM W-9:** The Contractor maybe required to properly complete and sign an IRS Form Substitute W-9 (Request for Taxpayer Identification Number(s) and Certification) and submit it to VDACS. The Substitute W-9 Form must identify the applicable tax reporting status (Individual/Sole Proprietor, Corporation, Partnership, Limited Liability Corporation – LLC, etc.) and appropriate Taxpayer Identification Number (TIN) or Social Security Number (SSN) before payments can be made under this contract.

XV. GENERAL TERMS AND CONDITIONS

- A. **VENDORS MANUAL:** This solicitation is subject to the provisions of the Commonwealth of Virginia *Vendors Manual* and any changes or revisions thereto, which are hereby incorporated into this contract in their entirety. The process for filing a complaint about this solicitation is in section 7.13 of the *Vendors Manual*. (Note section 7.13 does not apply to protests of awards or formal contractual claims.) The procedure for filing contractual claims is in section 7.19 of the *Vendors Manual*. A copy of the manual is normally available for review at the purchasing office and is accessible on the Internet at www.eva.virginia.gov under "I Sell To Virginia".
- B. **APPLICABLE LAWS AND COURTS:** This solicitation and any resulting contract shall be governed in all respects by the laws of the Commonwealth of Virginia, without regard to its choice of law provisions, and any litigation with respect thereto shall be brought in the circuit courts of the Commonwealth. The agency and the contractor are encouraged to resolve any issues in controversy arising from the award of the contract or any contractual dispute using Alternative Dispute Resolution (ADR) procedures (*Code of Virginia*, § 2.2-4366). ADR procedures are

described in Chapter 9 of the *Vendors Manual*. The contractor shall comply with all applicable federal, state and local laws, rules and regulations.

- C. **ANTI-DISCRIMINATION:** By submitting their (bids/proposals), (bidders/offerors) certify to the Commonwealth that they will conform to the provisions of the Federal Civil Rights Act of 1964, as amended, as well as the Virginia Fair Employment Contracting Act of 1975, as amended, where applicable, the Virginians With Disabilities Act, the Americans With Disabilities Act and § 2.2-4311 of the *Virginia Public Procurement Act (VPPA)*. If the award is made to a faith-based organization, the organization shall not discriminate against any recipient of goods, services, or disbursements made pursuant to the contract on the basis of the recipient's religion, religious belief, refusal to participate in a religious practice, or on the basis of race, age, color, gender sexual orientation, gender identity, or national origin and shall be subject to the same rules as other organizations that contract with public bodies to account for the use of the funds provided; however, if the faith-based organization segregates public funds into separate accounts, only the accounts and programs funded with public funds shall be subject to audit by the public body. (*Code of Virginia*, § 2.2-4343.1E).

In Every Contract over \$10,000, the provisions in 1. and 2. below apply:

1. During the Performance of this contract, the contractor agrees to the following:
 - a. The contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, sexual orientation, gender identity, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the contractor. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause
 - b. The contractor, in all solicitations or advertisements for employees placed by or on behalf of the contractor, will state that such contractor is an equal opportunity employer.
 - c. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.
 - d. If the contractor employs more than five employees, the contractor shall (i) provide annual training on the contractor's sexual harassment policy to all supervisors and employees providing services in the Commonwealth, except such supervisors or employees that are required to complete sexual harassment training provided by the Department of Human Resource Management, and (ii) post the contractor's sexual harassment policy in (a) a conspicuous public place in each building located in the Commonwealth that the contractor owns or leases for business purposes and (b) the contractor's employee handbook.
 - e. The requirements of these provisions 1. and 2. are a material part of the contract. If the Contractor violates one of these provisions, the Commonwealth may terminate the affected part of this contract for breach, or at its option, the whole contract. Violation of one of these provisions may also result in debarment from State contracting regardless of whether the specific contract is terminated.
 - f. In accordance with Executive Order 61 (2017), a prohibition on discrimination by the contractor, in its employment practices, subcontracting practices, and delivery of

goods or services, on the basis of race, sex, color, national origin, religion, sexual orientation, gender identity, age, political affiliation, disability, or veteran status, is hereby incorporated in this contract.

2. The contractor will include the provisions of 1. above in every subcontract or purchase order over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

- D. **ETHICS IN PUBLIC CONTRACTING:** By submitting their bids, bidders certify that their bids are made without collusion or fraud and that they have not offered or received any kickbacks or inducements from any other bidder, supplier, manufacturer or subcontractor in connection with their bid, and that they have not conferred on any public employee having official responsibility for this procurement transaction any payment, loan, subscription, advance, deposit of money, services or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value was exchanged.
- E. **IMMIGRATION REFORM AND CONTROL ACT OF 1986:** Applicable for all contracts over \$10,000: By entering into a written contract with the Commonwealth of Virginia, the Contractor certifies that the Contractor does not, and shall not during the performance of the contract for goods and services in the Commonwealth, knowingly employ an unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986.
- F. **DEBARMENT STATUS:** By participating in this procurement, the vendor certifies that they are not currently debarred by the Commonwealth of Virginia from submitting a response for the type of goods and/or services covered by this solicitation. Vendor further certifies that they are not debarred from filling any order or accepting any resulting order, or that they are an agent of any person or entity that is currently debarred by the Commonwealth of Virginia.
- If a vendor is created or used for the purpose of circumventing a debarment decision against another vendor, the non-debarred vendor will be debarred for the same time period as the debarred vendor.
- G. **ANTITRUST:** By entering into a contract, the contractor conveys, sells, assigns, and transfers to the Commonwealth of Virginia all rights, title and interest in and to all causes of action it may now have or hereafter acquire under the antitrust laws of the United States and the Commonwealth of Virginia, relating to the particular goods or services purchased or acquired by the Commonwealth of Virginia under said contract.
- H. **MANDATORY USE OF STATE FORM AND TERMS AND CONDITIONS FOR IFBS:** Failure to submit a bid on the official state form provided for that purpose shall be a cause for rejection of the bid. Modification of or additions to any portion of the Invitation for Bids may be cause for rejection of the bid; however, the Commonwealth reserves the right to decide, on a case by case basis, in its sole discretion, whether to reject such a bid as nonresponsive. As a precondition to its acceptance, the Commonwealth may, in its sole discretion, request that the bidder withdraw or modify nonresponsive portions of a bid which do not affect quality, quantity, price, or delivery. No modification of or addition to the provisions of the contract shall be effective unless reduced to writing and signed by the parties.
- I. **CLARIFICATION OF TERMS:** If any prospective bidder has questions about the specifications or other solicitation documents, the prospective bidder should contact the buyer whose name appears on the face of the solicitation no later than five working days before the due date. Any revisions to the solicitation will be made only by addendum issued by the buyer.

J. **PAYMENT:**

1. **To Prime Contractor:**

- a. Invoices for items ordered, delivered and accepted shall be submitted by the contractor directly to the payment address shown on the purchase order/contract. All invoices shall show the state contract number and/or purchase order number; social security number (for individual contractors) or the federal employer identification number (for proprietorships, partnerships, and corporations).
- b. Any payment terms requiring payment in less than 30 days will be regarded as requiring payment 30 days after invoice or delivery, whichever occurs last. This shall not affect offers of discounts for payment in less than 30 days, however.
- c. All goods or services provided under this contract or purchase order, that are to be paid for with public funds, shall be billed by the contractor at the contract price, regardless of which public agency is being billed.
- d. The following shall be deemed to be the date of payment: the date of postmark in all cases where payment is made by mail, or when offset proceedings have been instituted as authorized under the Virginia Debt Collection Act.
- e. **Unreasonable Charges.** Under certain emergency procurements and for most time and material purchases, final job costs cannot be accurately determined at the time orders are placed. In such cases, contractors should be put on notice that final payment in full is contingent on a determination of reasonableness with respect to all invoiced charges. Charges which appear to be unreasonable will be resolved in accordance with *Code of Virginia*, § 2.2-4363 and -4364. Upon determining that invoiced charges are not reasonable, the Commonwealth shall notify the contractor of defects or improprieties in invoices within fifteen (15) days as required in *Code of Virginia*, § 2.2-4351. The provisions of this section do not relieve an agency of its prompt payment obligations with respect to those charges which are not in dispute (*Code of Virginia*, § 2.2-4363).

2. **To Subcontractors:**

- a. Within seven (7) days of the contractor's receipt of payment from the Commonwealth, a contractor awarded a contract under this solicitation is hereby obligated:
 - i. To pay the subcontractor(s) for the proportionate share of the payment received for work performed by the subcontractor(s) under the contract; or
 - ii. To notify the agency and the subcontractor(s), in writing, of the contractor's intention to withhold payment and the reason.
- b. The contractor is obligated to pay the subcontractor(s) interest at the rate of one percent per month (unless otherwise provided under the terms of the contract) on all amounts owed by the contractor that remain unpaid seven (7) days following receipt of payment from the Commonwealth, except for amounts withheld as stated in (2) above. The date of mailing of any payment by U. S. Mail is deemed to be payment to the addressee. These provisions apply to each sub-tier contractor performing under the primary contract. A contractor's obligation to pay an interest

charge to a subcontractor may not be construed to be an obligation of the Commonwealth.

3. Each prime contractor who wins an award in which provision of a SWaM procurement plan is a condition to the award, shall deliver to the contracting agency or institution, on or before request for final payment, evidence and certification of compliance (subject only to insubstantial shortfalls and to shortfalls arising from subcontractor default) with the SWaM procurement plan. Final payment under the contract in question may be withheld until such certification is delivered and, if necessary, confirmed by the agency or institution, or other appropriate penalties may be assessed in lieu of withholding such payment.
 4. The Commonwealth of Virginia encourages contractors and subcontractors to accept electronic and credit card payments.
- K. **PRECEDENCE OF TERMS:** The following General Terms and Conditions *VENDORS MANUAL*, *APPLICABLE LAWS AND COURTS*, *ANTI-DISCRIMINATION*, *ETHICS IN PUBLIC CONTRACTING*, *IMMIGRATION REFORM AND CONTROL ACT OF 1986*, *DEBARMENT STATUS*, *ANTITRUST*, *MANDATORY USE OF STATE FORM AND TERMS AND CONDITIONS*, *CLARIFICATION OF TERMS*, *PAYMENT* shall apply in all instances. In the event there is a conflict between any of the other General Terms and Conditions and any Special Terms and Conditions in this solicitation, the Special Terms and Conditions shall apply.
- L. **QUALIFICATIONS OF BIDDERS:** The Commonwealth may make such reasonable investigations as deemed proper and necessary to determine the ability of the bidder to perform the services/furnish the goods and the bidder shall furnish to the Commonwealth all such information and data for this purpose as may be requested. The Commonwealth reserves the right to inspect bidder's physical facilities prior to award to satisfy questions regarding the bidder's capabilities. The Commonwealth further reserves the right to reject any (bid/proposal) if the evidence submitted by, or investigations of, such bidder fails to satisfy the Commonwealth that such bidder is properly qualified to carry out the obligations of the contract and to provide the services and/or furnish the goods contemplated therein.
- M. **TESTING AND INSPECTION:** The Commonwealth reserves the right to conduct any test/inspection it may deem advisable to assure goods and services conform to the specifications.
- N. **ASSIGNMENT OF CONTRACT:** A contract shall not be assignable by the contractor in whole or in part without the written consent of the Commonwealth.
- O. **CHANGES TO THE CONTRACT:** Changes can be made to the contract in any of the following ways:
1. The parties may agree in writing to modify the terms, conditions, or scope of the contract. Any additional goods or services to be provided shall be of a sort that is ancillary to the contract goods or services, or within the same broad product or service categories as were included in the contract award. Any increase or decrease in the price of the contract resulting from such modification shall be agreed to by the parties as a part of their written agreement to modify the scope of the contract.
 2. The Purchasing Agency may order changes within the general scope of the contract at any time by written notice to the contractor. Changes within the scope of the contract include, but are not limited to, things such as services to be performed, the method of packing or shipment, and the place of delivery or installation. The contractor shall comply with the notice upon receipt, unless the contractor intends to claim an adjustment to compensation, schedule, or other contractual impact that would be caused by complying with such notice, in which case the contractor shall, in writing, promptly notify the Purchasing Agency of the

adjustment to be sought, and before proceeding to comply with the notice, shall await the Purchasing Agency's written decision affirming, modifying, or revoking the prior written notice. If the Purchasing Agency decides to issue a notice that requires an adjustment to compensation, the contractor shall be compensated for any additional costs incurred as the result of such order and shall give the Purchasing Agency a credit for any savings. Said compensation shall be determined by one of the following methods:

- a. By mutual agreement between the parties in writing; or
- b. By agreeing upon a unit price or using a unit price set forth in the contract, if the work to be done can be expressed in units, and the contractor accounts for the number of units of work performed, subject to the Purchasing Agency's right to audit the contractor's records and/or to determine the correct number of units independently; or
- c. By ordering the contractor to proceed with the work and keep a record of all costs incurred and savings realized. A markup for overhead and profit may be allowed if provided by the contract. The same markup shall be used for determining a decrease in price as the result of savings realized. The contractor shall present the Purchasing Agency with all vouchers and records of expenses incurred and savings realized. The Purchasing Agency shall have the right to audit the records of the contractor as it deems necessary to determine costs or savings. Any claim for an adjustment in price under this provision must be asserted by written notice to the Purchasing Agency within thirty (30) days from the date of receipt of the written order from the Purchasing Agency. If the parties fail to agree on an amount of adjustment, the question of an increase or decrease in the contract price or time for performance shall be resolved in accordance with the procedures for resolving disputes provided by the Disputes Clause of this contract or, if there is none, in accordance with the dispute provisions of the Commonwealth of Virginia *Vendors Manual*. Neither the existence of a claim nor a dispute resolution process, litigation or any other provision of this contract shall excuse the contractor from promptly complying with the changes ordered by the Purchasing Agency or with the performance of the contract generally.

P. **DEFAULT:** In case of failure to deliver goods or services in accordance with the contract terms and conditions, the Commonwealth, after due oral or written notice, may procure them from other sources and hold the contractor responsible for any resulting additional purchase and administrative costs. This remedy shall be in addition to any other remedies which the Commonwealth may have.

Q. **TAXES:** Sales to the Commonwealth of Virginia are normally exempt from State sales tax. State sales and use tax certificates of exemption, Form ST-12, will be issued upon request. Deliveries against this contract shall usually be free of Federal excise and transportation taxes. The Commonwealth's excise tax exemption registration number is 54-73-0076K.

If sales or deliveries against the contract are not exempt, the contractor shall be responsible for the payment of such taxes unless the tax law specifically imposes the tax upon the buying entity and prohibits the contractor from offering a tax-included price.

R. **INSURANCE:** By signing and submitting a bid or proposal under this solicitation, the bidder or offeror certifies that if awarded the contract, it will have the following insurance coverage at the time the contract is awarded. For construction contracts, if any subcontractors are involved, the subcontractor will have workers' compensation insurance in accordance with §§ 2.2-4332 and 65.2-800 et seq. of the *Code of Virginia*. The bidder or offeror further certifies that the contractor and any subcontractors will maintain these insurance coverage during the entire term of the contract

and that all insurance coverage will be provided by insurance companies authorized to sell insurance in Virginia by the Virginia State Corporation Commission.

MINIMUM INSURANCE COVERAGE AND LIMITS:

1. Workers' Compensation - Statutory requirements and benefits. Coverage is compulsory for employers of three or more employees, to include the employer. Contractors who fail to notify the Commonwealth of increases in the number of employees that change their workers' compensation requirements under the Code of Virginia during the course of the contract shall be in noncompliance with the contract.
2. Employer's Liability - Statutory in the Commonwealth of \$100,000 per accident/\$500,000 per policy/\$100,000 per employee.
3. Commercial General Liability - \$1,000,000 per occurrence and \$2,000,000 in the aggregate. Commercial General Liability is to include bodily injury and property damage, personal injury and advertising injury, contractual, and products and completed operations coverage. The Commonwealth of Virginia shall be added as an additional insured to the policy by an endorsement, or by blanket coverage.
4. Automobile Liability - \$1,000,000 combined single limit. (Required only if a motor vehicle not owned by the Commonwealth is to be used in the contract. Contractor must assure that the required coverage is maintained by the Contractor (or third party owner of such motor vehicle).
5. ADDITIONAL INSURANCE: Coverage is to include Premises/Operations Liability, Independent Contractor's Liability, Owner's and Contractor's Protective Liability, and Personal Injury Liability.

Aircraft Liability - \$1,000,000 single limit for each occurrence for bodily injury and property damage.

Chemical Liability - \$100,000 per person, \$300,000 per occurrence for bodily injury; \$100,000 for each occurrence/aggregate for property damage. Must include coverage for treating in residential areas.

Airport/Premises Liability - \$1,000,000 Combined single limit per occurrence for all bodily injury and property damage.

The Contractor shall provide VDACS Purchasing Office a Commonwealth of Virginia Certificate of Insurance for his firm, and if subcontractors are used, for specified subcontractors prior to the start of any work under the contract, naming the Commonwealth of Virginia/VDACS as co-insured on all insurance policies listed.

If any work under this contract is subcontracted or performed by anyone other than the Contractor or performed with equipment subcontracted or leased by the Contractor, the Contractor must provide evidence that the specified liability insurance for any persons and/or equipment so subcontracted or leased is provided for under policies maintained by the subcontractor.

A thirty-day (30) written notice of cancellation or non-renewal of the insurance policy shall be furnished by certified mail to the Purchasing Office at the address indicated on the solicitation.

- S. **ANNOUNCEMENT OF AWARD:** Upon the award or the announcement of the decision to award a contract as a result of this solicitation, the purchasing agency will publicly post such notice on the DGS/DPS eVA VBO (www.eva.virginia.gov) for a minimum of 10 days.'

- T. **DRUG-FREE WORKPLACE:** Applicable for all contracts over \$10,000:

During the performance of this contract, the contractor agrees to (i) provide a drug-free workplace for the contractor's employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the contractor that the contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

For the purposes of this section, "*drug-free workplace*" means a site for the performance of work done in connection with a specific contract awarded to a contractor, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract.

- U. **NONDISCRIMINATION OF CONTRACTORS:** A bidder, offeror, or contractor shall not be discriminated against in the solicitation or award of this contract because of race, religion, color, sex, sexual orientation, gender identity, national origin, age, disability, faith-based organizational status, any other basis prohibited by state law relating to discrimination in employment or because the bidder or offeror employs ex-offenders unless the state agency, department or institution has made a written determination that employing ex-offenders on the specific contract is not in its best interest. If the award of this contract is made to a faith-based organization and an individual, who applies for or receives goods, services, or disbursements provided pursuant to this contract objects to the religious character of the faith-based organization from which the individual receives or would receive the goods, services, or disbursements, the public body shall offer the individual, within a reasonable period of time after the date of his objection, access to equivalent goods, services, or disbursements from an alternative provider.

- V. **eVA BUSINESS-TO-GOVERNMENT VENDOR REGISTRATION, CONTRACTS, AND ORDERS:** The eVA Internet electronic procurement solution, website portal www.eVA.virginia.gov, streamlines and automates government purchasing activities in the Commonwealth. The eVA portal is the gateway for vendors to conduct business with state agencies and public bodies. All vendors desiring to provide goods and/or services to the Commonwealth shall participate in the eVA Internet eprocurement solution by completing the free eVA Vendor Registration. All bidders or offerors must register in eVA and pay the Vendor Transaction Fees specified below; failure to register will result in the bid/proposal being rejected.

Vendor transaction fees are determined by the date the original purchase order is issued and the current fees are as follows:

1. For orders issued July 1, 2014, and after, the Vendor Transaction Fee is:
 - a. DSBSD-certified Small Businesses: 1%, capped at \$500 per order.
 - b. Businesses that are not DSBSD-certified Small Businesses: 1%, capped at \$1,500 per order.
2. Refer to Special Term and Condition "eVA Orders and Contracts" to identify the number of purchase orders that will be issued as a result of this solicitation/contract with the eVA transaction fee specified above addressed for each order.

For orders issued prior to July 1, 2014, the vendor transaction fees can be found at www.eVA.virginia.gov.

The specified vendor transaction fee will be invoiced, by the Commonwealth of Virginia Department of General Services, typically within 60 days of the order issue date. Any adjustments (increases/decreases) will be handled through purchase order changes.

- W. **AVAILABILITY OF FUNDS:** It is understood and agreed between the parties herein that the agency shall be bound hereunder only to the extent that the legislature has appropriated funds that are legally available or may hereafter become legally available for the purpose of this agreement.
- X. **SET-ASIDES IN ACCORDANCE WITH THE SMALL BUSINESS ENHANCEMENT AWARD PRIORITY.** This solicitation is set-aside for DSBSD-certified micro businesses or small businesses when designated "Micro Business Set-Aside Award Priority" or "Small Business Set-Aside Award Priority" accordingly in the solicitation. DSBSD-certified micro business or small businesses, this include the DSBSD-certified women-owned and minority-owned businesses when they have received the DSBSD small business certification. For purposes of award, bidders shall be deemed micro business or small businesses if and only if they are certified as such by DSBSD on the due date for receipt of bids.
- Y. **BID PRICE CURRENCY:** Unless stated otherwise in the solicitation, bidders shall state bid prices in US dollars.
- Z. **AUTHORIZATION TO CONDUCT BUSINESS IN THE COMMONWEALTH:** A contractor organized as a stock or nonstock corporation, limited liability company, business trust, or limited partnership or registered as a registered limited liability partnership shall be authorized to transact business in the Commonwealth as a domestic or foreign business entity if so required by Title 13.1 or Title 50 of the *Code of Virginia* or as otherwise required by law. Any business entity described above that enters into a contract with a public body pursuant to the *Virginia Public Procurement Act* shall not allow its existence to lapse or its certificate of authority or registration to transact business in the Commonwealth, if so required under Title 13.1 or Title 50, to be revoked or cancelled at any time during the term of the contract. A public body may void any contract with a business entity if the business entity fails to remain in compliance with the provisions of this section.
- AA. **CIVILITY IN STATE WORKPLACES:** The contractor shall take all reasonable steps to ensure that no individual, while performing work on behalf of the contractor or any subcontractor in connection with this agreement (each, a "Contract Worker"), shall engage in 1) harassment (including sexual harassment), bullying, cyber-bullying, or threatening or violent conduct, or 2) discriminatory behavior on the basis of race, sex, color, national origin, religious belief, sexual orientation, gender identity or expression, age, political affiliation, veteran status, or disability.

The contractor shall provide each Contract Worker with a copy of this Section and will require Contract Workers to participate in agency training on civility in the State workplace if contractor's (and any subcontractor's) regular mandatory training programs do not already encompass equivalent or greater expectations. Upon request, the contractor shall provide documentation that each Contract Worker has received such training.

For purposes of this Section, "State workplace" includes any location, permanent or temporary, where a Commonwealth employee performs any work-related duty or is representing his or her agency, as well as surrounding perimeters, parking lots, outside meeting locations, and means of travel to and from these locations. Communications are deemed to occur in a State workplace if the Contract Worker reasonably should know that the phone number, email, or other method of communication is associated with a State workplace or is associated with a person who is a State employee.

The Commonwealth of Virginia may require, at its sole discretion, the removal and replacement of any Contract Worker who the Commonwealth reasonably believes to have violated this Section.

This Section creates obligations solely on the part of the contractor. Employees or other third parties may benefit incidentally from this Section and from training materials or other communications distributed on this topic, but the Parties to this agreement intend this Section to be enforceable solely by the Commonwealth and not by employees or other third parties.

XVI. SPECIAL TERMS AND CONDITIONS

- A. **AWARD:** The Commonwealth will make the award on the Total Bid Price basis to the lowest responsive and responsible bidder. The purchasing office reserves the right to conduct any test it may deem advisable and to make all evaluations. The Commonwealth also reserves the right to reject any or all bids, in whole or in part, to waive informalities and to delete items prior to making the award, whenever it is deemed in the sole opinion of the procuring public body to be in its best interest.
- B. **eVA ORDERS AND CONTRACTS:** The solicitation/contract will result in one purchase order with the applicable eVA transaction fee assessed for each order.

Vendors desiring to provide goods and/or services to the Commonwealth shall participate in the eVA Internet e-procurement solution and agree to comply with the following: If this solicitation is for a term contract, failure to provide an electronic catalog (price list) or index page catalog for items awarded will be just cause for the Commonwealth to reject your bid/offer or terminate this contract for default. The format of this electronic catalog shall conform to the eVA Catalog Interchange Format (CIF) Specification that can be accessed and downloaded from www.eVA.virginia.gov. Contractors should email Catalog or Index Page information to eVA-catalog-manager@dgs.virginia.gov.

- C. **BID ACCEPTANCE PERIOD:** Any bid in response to this solicitation shall be valid for 90 days. At the end of the days the bid may be withdrawn at the written request of the bidder. If the bid is not withdrawn at that time it remains in effect until an award is made or the solicitation is canceled.
- D. **IDENTIFICATION OF BID/PROPOSAL ENVELOPE:** If a special envelope is not furnished, or if return in the special envelope is not possible, the signed bid/proposal should be returned in a separate envelope or package, sealed and identified as follows:

From: _____
Name of Bidder/Offeror Due Date Time

Street or Box Number IFB No./RFP No.

City, State, Zip Code IFB/RFP Title

DSBSD-certified Micro Business or Small Business No. _____

Name of Contract/Purchase Officer or Buyer _____

- E. **INDEMNIFICATION:** Contractor agrees to indemnify the Commonwealth of Virginia, its officers, agents, and employees for any loss, liability, cost, or reasonable settlement cost incurred as a result of any claims, damages and actions of any kind or nature, whether at law or in equity, arising from or caused by the use of any materials, goods, or equipment of any kind or nature furnished by the contractor/any services of any kind or nature furnished by the contractor, provided that such liability is not attributable to the sole negligence of the using agency or to failure of the using agency to use the materials, goods, or equipment in the manner already and permanently described by the contractor on the materials, goods or equipment delivered.
- F. **LABELING OF HAZARDOUS SUBSTANCES:** If any items or products requested by this solicitation are "Hazardous Substances", as defined by § 1261 of Title 15 of the United States Code (U.S.C.) or "Pesticides" as defined in § 136 of Title 7 of the United States Code, then the Bidder, by submitting the bid, certifies and warrants that the items or products to be delivered under this contract shall be properly labeled, as required by the foregoing sections and that by delivering the items or products, the Bidder does not violate any of the prohibitions of Title 15 U.S.C. § 1263 or Title 7 U.S.C. § 136.
- G. **LIQUIDATED DAMAGES:** Due to the behavior of the gypsy moth and other biological factors, and the amount of time available during which the aerial application must be made (estimated to be April, 2021 through June, 2021) to be successful, it is hereby understood and agreed by the Bidder, that delays caused by the Contractor during periods of acceptable spray conditions are costly to VDACS and damaging to the outcome of the program and therefore, the sums listed in the following subparagraphs will be deducted, not as a penalty, but as liquidated damages for each occurrence. Liquidated damages will not be assessed against the Contractor if delays are caused by any act, negligence, or default on the part of VDACS, public enemy, war, embargo, fire or explosion not caused by the supplier(s), riot, sabotage, or labor trouble, that results from a cause or causes entirely beyond the control or fault of the Contractor or the supplier(s). The Contractor is not liable for agreed damages if the failure to meet the terms of the contract arises out of causes beyond the control and without the fault or negligence of the Contractor. Such causes may include, but are not restricted to, acts of God or of the public enemy, acts of the Commonwealth of Virginia in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather; but in every case, the failure to perform must be beyond the control and without the fault or negligence of the Contractor. A reasonable extension of time as VDACS deems appropriate may be granted upon receipt of a written request and justification for an extension from the Contractor. VDACS may extend the time of delay for performance of the contract at VDACS' sole discretion for good cause shown.

Any incident in which a Contractor is assessed damages as described in this section must be documented in writing by the STS Project Supervisor and submitted to the program supervisor for approval. A copy of this report will be given to the Contractor. All approved reports will be subject to the appropriate provisions, and assessed costs will be deducted from the final payment made to the Contractor. The burden of proof to dispute these assessments is upon the Contractor.

1. **LATE ARRIVAL:** Notice will be given to the Contractor at least two (2) days in advance of a time and location to have the equipment assembled for the program start. The program start date is usually two days before actual spraying and is needed for calibration checks, final inspection, equipment and DGPS check, and pilot briefing. At that time, the aircraft, its equipment, and ground-support equipment must be ready and operating according to Contract Specifications. Failure to arrive on the specified day and within a reasonable period of the agreed time and day will cause liquidated damages to be assessed against the amount due the Contractor, at the rate of **One Thousand Dollars (\$1,000) per day per aircraft**. Arrival on time, but failure to have all the equipment and personnel on site and ready, which causes a delay in calibration or equipment checks of two hours or more, will cause liquidated damages to be assessed against the Contractor(s), at the rate of

One Thousand Dollars (\$1,000) per aircraft. Delays, which make it impossible to properly calibrate the same day, will cause liquidated damages to be assessed at **Two Thousand Dollars (\$2,000) per day per aircraft.**

2. **TARDINESS:** The daily operation is to start 30 minutes before sunrise. The Contractor's personnel must be at the work site far enough in advance to have the treatment aircraft checked, engines warmed up and insecticide properly loaded and ready for take-off, when there is sufficient light for safe spraying. A delay in "first trip take-off" due to tardiness when conditions are acceptable for spraying will cause liquidated damages to be assessed against the amount due the Contractor at a rate of **Five Hundred Dollars (\$500) per hour or portion thereof.** Delays in turn-around time for fueling, pesticide loading, and maintenance during spray times as a result of insufficient number of ground personnel, materials, equipment, organization, or expertise will cause liquidated damages to be assessed against the amount due the Contractor at a rate of **Five Hundred Dollars (\$500) per hour or portion thereof per each unacceptable delay incident.**
3. **DELAYS:** The number of personnel and the quantity and quality of insecticide, water, and aircraft fuel at the loading site must be sufficient to keep each aircraft in full production for a minimum period of five consecutive hours. A shutdown or delay caused by a shortage of qualified personnel and/or a lack of acceptable insecticide, water, or fuel when spraying conditions are acceptable during this five-hour period may be assessed against the Contractor at the rate of **One Thousand Dollars (\$1,000) per hour or portion thereof of acceptable spray time lost per aircraft per occurrence.**

Any other Contractor-caused delay including, but not limited to, failure to supply the required aircraft, equipment failures, aircraft problems, failure to have an approved FAA waiver for the treatment of congested areas, or spray pilot difficulties with navigation, spray block reconnaissance, spray block orientation, and/or electronic equipment operation may be assessed against the Contractor at the rate of **One Thousand Dollars (\$1,000) per hour or portion thereof of acceptable spray time lost per aircraft per occurrence**

4. **INSUFFICIENT MATERIAL:** The quantity of insecticide and aircraft fuel at the loading site must be sufficient to keep the aircraft, including auxiliary aircraft, in full production for a minimum of five hours. A shut-down caused by a lack of insecticide or fuel when spraying conditions are acceptable will cause liquidated damages to be assessed against the amount due the Contractor at the rate of **Five Hundred Dollars (\$500) per incident.**
5. **LOADING ZONES:** Failure to have an adequate number of loading zones designated two (2) weeks prior to the start of the project as specified may be assessed against the Contractor at the amount of **Five Thousand Dollars (\$5,000).** Additional or alternative worksites used during the operation that were not designated by the due date may be assessed at the rate of **Five Hundred Dollars (\$500) per site.**

If locating additional sites results in a loss of acceptable application time, damages will accrue as specified in Section XVI, Item G and may be assessed as specified.

6. **IMPROPER APPLICATION:** A uniform application at the proper droplet size and rate per acre, within the designated area, is essential for a high quality, successful program. Where faulty application makes it necessary to re-spray areas not satisfactorily covered by the Contractor, such areas shall be re-sprayed by the Contractor, **at no additional cost to VDACS for either flight time or insecticide.** If the Contractor is unable to re-spray these areas, VDACS has the option of contracting to have these areas re-sprayed. The cost of re-spraying shall be the responsibility of the Contractor and either deducted from the invoice submitted by the Contractor, or if the invoice has been paid, reimbursed to VDACS

by the Contractor. Where faulty application results in a significant area outside the designated boundaries being treated, the Contractor will be charged for the insecticide and application cost.

The Contractor will not be paid for any acreage treated outside the designated block boundaries (Section 3, Item A, 1-3).

Spraying insecticide at concentrations other than those prescribed in these Contract Specifications (Section IX) may lead to liquidated damages being assessed against the Contractor at the rate of **Two Thousand Dollars (\$2,000) per incident**.

7. IMPROPER MIXING: A Contractor found spraying insecticide formulations at concentrations other than prescribed in these specifications will cause liquidated damages to be assessed at the rate of **One Thousand Dollars (\$1,000) per incident**.
8. INSECTICIDE LOSSES, SPILLS, AND DUMPS: The Contractor will not be compensated for any Contractor-supplied insecticide which is lost, spilled, dumped, or otherwise made unavailable.

If any insecticide loss, spill, or dump results in a loss of acceptable spray time, damages will accrue as specified in Section XVI, Item G, Number 3 and may be assessed as specified.
9. POOR PILOT PERFORMANCE: The VDACS reserves the right to reject any pilot, who in its opinion, violates contract rules, is unsafe, or otherwise performs unsatisfactorily. In such an event, the Contractor shall be required furnish a replacement pilot, within 24 hours, who is considered capable and qualified to safely fly and properly perform the application. Failure to furnish a replacement pilot within the specified time will result in an assessment against the amount due the Contractor of Two Thousand Five Hundred Dollars (\$2,500) per day.
10. EQUIPMENT/AIRCRAFT FAILURE: It is understood that occasionally an aircraft or truck will develop a mechanical problem even with proper maintenance. No assessment will be charged to the Contractor for such a breakdown, providing the equipment can be made ready for work within 48 hours. After the 48 hour period, liquidated damages will be assessed at a rate of Five Hundred Dollars (\$500) for each hour of acceptable flying conditions not flown. If an aircraft suffers from frequent mechanical problems, the Program Coordinator reserves the right to notify the Contractor that the aircraft must be replaced with one from the same aircraft category (reference Section III, Paragraph B) within 48 hours. Failure to provide a replacement within the allotted time will result in liquidated damages being assessed against the amount due the Contractor of One Thousand Five Hundred Dollars (\$1,500) per day. Failure of the DGPS to perform as specified will result in liquidated damages being assessed against the amount due the Contractor of Five Hundred Dollars (\$500) for each day of acceptable treatment conditions the system is not used or functioning properly.
11. DGPS DATA: Failure to provide the data collected daily by the spray aircraft's DGPS may be assess at the rate of **Five Hundred Dollars (\$500) per incident**.
12. PROCEDURE: Any incident in which a Contractor causes a delay, as described in this section, will be documented by VDACS and submitted to the Program Coordinator for his approval. A copy of this report will be given to the Contractor. All approved reports will be subject to the appropriate provisions and assessed liquidated damages will be deducted from payments due the Contractor.

H. SUBMISSION OF SMALL BUSINESS SUBCONTRACTING PLAN, EVIDENCE OF COMPLIANCE WITH SMALL BUSINESS SUBCONTRACTING PLAN, AND SUBCONTRACTOR REPORTING:

1. Submission of Small Business Subcontracting Plan: It is the statewide goal of the Commonwealth that 42% of its purchases be made from small businesses certified by DSBSD. This includes discretionary spending in prime contracts and subcontracts. All bidders/offerors are required to submit a Small Business Subcontracting Plan. The contractor is encouraged to offer such subcontracting opportunities to DSBSD-certified small businesses. This shall include DSBSD-certified women-owned and minority-owned businesses and businesses with DSBSD service disabled veteran-owned status when they have also received DSBSD small business certification. Where it is not practicable for any portion of the goods/services to be subcontracted to other suppliers, the bidder/offeror shall note such on the Small Business Subcontracting Plan. No bidder/offeror or subcontractor shall be considered a small business unless certified as such by the Department of Small Business and Supplier Diversity (DSBSD) by the due date for receipt of bids or proposals.
 2. Evidence of Compliance with Small Business Subcontracting Plan: Each prime contractor who wins an award in which provision of a small business subcontracting plan is a condition of the award, shall deliver to the contracting agency or institution monthly reports substantiating compliance in accordance with the small business subcontracting plan. If a variance exists, the contractor shall provide a written explanation. A subcontractor shall be considered a Small Business for purposes of a contract if and only if the subcontractor holds a certification as such by the DSBSD. Payment(s) may be withheld until the purchasing agency confirms that the contractor has certified compliance with the contractor's submitted Small Business Subcontracting Plan or is in receipt of a written explanation of the variance. The agency or institution reserves the right to pursue other appropriate remedies for non-compliance to include, but not be limited to, termination for default.
 3. Prime Contractor Subcontractor Reporting:
 - a. Each prime contractor who wins an award greater than \$100,000, shall deliver to the contracting agency or institution on a monthly basis, all applicable information for each subcontractor listed on the Small Business Subcontracting Plan that are DSBSD-certified businesses or Employment Services Organizations (ESOs). The contractor shall furnish the applicable information to the purchasing office via the Subcontractor Payment Reporting tool accessible within the contractor's eVA account.
 - b. In addition each prime contractor who wins an award greater than \$200,000 shall deliver to the contracting agency or institution on a monthly basis, all applicable information on use of subcontractors that are **not** DSBSD-certified businesses or Employment Services Organizations. The contractor shall furnish the all applicable information to the purchasing office via the Subcontractor Payment Reporting tool accessible within the contractor's eVA account.
- I. **PRIME CONTRACTOR RESPONSIBILITIES:** The contractor shall be responsible for completely supervising and directing the work under this contract and all subcontractors that he may utilize, using his best skill and attention. Subcontractors who perform work under this contract shall be responsible to the prime contractor. The contractor agrees that he is as fully responsible for the acts and omissions of his subcontractors and of persons employed by them as he is for the acts and omissions of his own employees.

- J. **SUBCONTRACTS:** No portion of the work shall be subcontracted without prior written consent of the purchasing agency. In the event that the contractor desires to subcontract some part of the work specified herein, the contractor shall furnish the purchasing agency the names, qualifications and experience of their proposed subcontractors. The contractor shall, however, remain fully liable and responsible for the work to be done by its subcontractor(s) and shall assure compliance with all requirements of the contract.
- K. **STATE CORPORATION COMMISSION IDENTIFICATION NUMBER:** Pursuant to Code of Virginia, §2.2-4311.2 subsection B, a bidder or offeror organized or authorized to transact business in the Commonwealth pursuant to Title 13.1 or Title 50 is required to include in its bid or proposal the identification number issued to it by the State Corporation Commission (SCC). Any bidder or offeror that is not required to be authorized to transact business in the Commonwealth as a foreign business entity under Title 13.1 or Title 50 or as otherwise required by law is required to include in its bid or proposal a statement describing why the bidder or offeror is not required to be so authorized. Indicate the above information on the SCC Form provided. Contractor agrees that the process by which compliance with Titles 13.1 and 50 is checked during the solicitation stage (including without limitation the SCC Form provided) is streamlined and not definitive, and the Commonwealth's use and acceptance of such form, or its acceptance of Contractor's statement describing why the bidder or offeror was not legally required to be authorized to transact business in the Commonwealth, shall not be conclusive of the issue and shall not be relied upon by the Contractor as demonstrating compliance.
- L. **E-VERIFY PROGRAM:** EFFECTIVE 12/1/13. Pursuant to *Code of Virginia*, §2.2-4308.2., any employer with more than an average of 50 employees for the previous 12 months entering into a contract in excess of \$50,000 with any agency of the Commonwealth to perform work or provide services pursuant to such contract shall register and participate in the E-Verify program to verify information and work authorization of its newly hired employees performing work pursuant to such public contract. Any such employer who fails to comply with these provisions shall be debarred from contracting with any agency of the Commonwealth for a period up to one year. Such debarment shall cease upon the employer's registration and participation in the E-Verify program. If requested, the employer shall present a copy of their Maintain Company page from E-Verify to prove that they are enrolled in E-Verify.

XVII. METHOD OF PAYMENT

The Contractor shall be paid per the Prompt Payment Act, §§ 2.2-4347 – 2.2-4354 of the Code of Virginia. The method of payment will be made by check or electronic exchange.

Payment will be on a reimbursement basis for actual services performed, upon receipt of invoice(s) from the Contractor. Payment will be issued based on VDACS personnel's verification of daily insecticide load sheets (Daily Aircraft Records–VDACS) and approval by the Program Supervisor or his/her designee. Acreage treated will be determined based on the amount of gallons of insecticide loaded into the aircraft and applied to the target site.

Payment will be paid on the basis of proper invoices submitted. Invoices shall only be submitted upon completion and acceptance of the aerial application of the contracted project area. The acres treated will be based on gallons of Btk material sprayed as indicated on daily aircraft record. The invoices must show:

- The number of acres sprayed,
- Unit price per acre, and
- Total cost.

Ten percent of the total cost will be withheld until the results of the treatment can be verified up to a maximum of 60 days.

I. PRICING SCHEDULE

The pricing schedule consists of one lot. Bidders must indicate the unit price (per acre), that should include all of the product and service costs associated with providing the aerial insecticide spraying.

Bidders must indicate the *Btk* formulation and DGPS make and model. The award of the contract will be based on the **Total Bid Price**. Refer to Section I, Table 1 for the number of proposed acres to be treated.

Note: The treatment acres herein are estimated only and may increase or decrease depending on the needs of the VDACS. The Awarded Contractor shall be paid at the unit price for actual work performed.

Treatment areas: Counties of Halifax, Russell, & Washington, and the City of Chesapeake

1. \$_____ Price per acre x (estimated 5,438 acres) = \$_____ **Total Bid Price**

_____ Check this box to acknowledge the Btk Formulation shall be Foray 48B, applied at a rate of ½ gallon/acre (24 CLU/acre)

Indicate DGPS Make and Model: _____

RETURN OF THIS PAGE IS REQUIRED

II. REQUIRED DOCUMENTS FOR GYPSY MOTH AERIAL INSECTICIDE SPRAYING

1. Cover Sheet, Signed (Due at Bid Submission)
2. Pricing Schedule (Due at Bid Submission)
3. Attachments – Data Sheets A-C & E (Due at bid submission)
4. FAA Aircraft Registration(s) for each aircraft that will be used (Due at Bid Submission)
5. FAA Commercial Pilot Certification(s) for each pilot that will be spraying (Due at Bid Submission)
6. FAR Part 137 Certification (Due at Bid Submission)
7. Written plan addressing emergency replacement of aircraft (Due at Bid Submission)
8. VA Commercial Aircraft License (Due at Bid Submission)
9. VA Pesticide Business License (Due within 10 days of notification)
10. VA Commercial Certified Pesticide Applicator License for each pilot that will be spraying (Due within 10 days of notification)
 - a) Aerial Pesticide Application – Category 11
11. Insurance Certificates (Due within 10 days of notification)
 - a) Employer's Liability
 - b) Automobile Liability
 - c) Aircraft Liability
 - d) Workers Compensation
 - e) Commercial General Liability
 - f) Chemical Liability
12. Out-of-state meter certification from Contractor's State Weights and Measures Department (Due within 10 days of notification)
13. IRS Form W-9 or Substitute W-9 (If requested)
14. Heliports and Airfields (If awarded, and due upon request)
15. *Btk* Formulation Label and Material Safety Data Sheet (Due at pre-work meeting and must be on site throughout project)
16. Subcontractor Information, if applicable (30 days prior to treatment initiation)
17. List of Contractor Personnel, including Project Supervisor, Pilots, and Security Personnel (Due upon request)

XX. ATTACHMENTS

ATTACHMENT A: CONTRACTOR DATA SHEET

Note: The following information is required and failure to submit all information requested may result in the agency requiring prompt submission of missing information.

1. Qualification: The vendor must have the capability and capacity in all respects to fully satisfy all of the contractual requirements.

2. Vendor's Primary Contact:

Name: _____ Phone: _____

3. Years in Business: Indicate the length of time you have been in business providing this type of goods or services:

_____ Years _____ Months

4. Type of Business: This information is requested for informational purposes only. Please indicate if your businesses one or more of the following:

() SMALL BUSINESS () INDIVIDUAL BUSINESS () OTHER:
() WOMAN-OWNED BUSINESS () SOLE PROPRIETORSHIP _____
() MINORITY-OWNED BUSINESS () PARTNERSHIP
() SHELTERED WORKSHOP () CORPORATION

5. Indicate below a listing of at least three (3) current or recent accounts, either commercial or governmental, that your business has provided similar goods and/or services.

1. Company: _____ Contact: _____

Address: _____

Phone : (____) _____ Email: _____

Project: _____

Dates of Service: _____ \$ Value: _____

2. Company: _____ Contact: _____

Address: _____

Phone : (____) _____ Email: _____

Project: _____

Dates of Service: _____ \$ Value: _____

3. Company: _____ Contact: _____

Address: _____

Phone : (____) _____ Email: _____

Project: _____

Dates of Service: _____ \$ Value: _____

I certify the accuracy of this information:

Signed: _____ Title: _____ Date: _____

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ATTACHMENT B: AIRCRAFT DESCRIPTION FORM

1. Spray Project Contractor Information		
a. Name	b. Telephone	Type or print all information in ink. Return completed and signed form to the Field Project Coordinator. See Contract Specifications for the name and address.
c. Address	d. City, State, and Zip Code	
e. Contractor's VA Department of Agriculture and Consumer Services - Pesticide Application Business License number:		

2. Aircraft Owner Information			
a. Aircraft is (check one): Owned_____, subcontracted_____, or leased_____ by the spray project contractor			
b. Owner's Name	c. Address	d. City, State, and Zip Code	e. Telephone

3. Aircraft Description & Information						
a. Type of aircraft (check one): Spray fixed-wing____ Spray helicopter____ Observation fixed-wing____ Observation helicopter					b. Qualified under: FAR Part 135____ FAR Part 137	
c. Aircraft: Make_____ Model_____ Series			d. Number of engines	e. FAA Number N_____	f. Year built	g. Passenger capacity
h. Registration certification Yes____ No____	i. Airworthiness certification Yes____ No____	j. Cruising speed: MPH____ Knots____		k. Hours of fuel	l. Time since 100-hour inspection	
m. Registration category		n. Major modifications				

4. Airframe			
a. Hours since new	b. Used for acrobatics: Yes____ No____	c. Parking brakes: Yes____ No____	d. Paint scheme

5. Engines			
a. Make and model		b. Horsepower	c. Type fuel
d. Supercharger: Yes____ No____			
e. Hours since new: Engine 1____ Engine 2____		f. Hours since major overhaul: Engine 1____ Engine 2____	g. Hours before next major overhaul: Engine 1____ Engine 2____

6. Propellers	
a. Hours since overhaul Number 1____ Number 2____	

7. Helicopter Components			
a. Hours since new: Main rotor____ Tail rotor____ Transmission		b. Hours since overhaul: Main rotor____ Tail rotor____ Transmission	
c. Hours before next overhaul: Main rotor____ Tail rotor____ Transmission		d. Drop stops: Yes____ No____	e. Skids: Yes____ No____
		f. Rotor brakes: Yes____ No____	
g. Other (specify)			

8. Instruments					
a. Fuel quantity: Yes____ No____	b. Stall warning: Yes____ No____	c. Airspeed: Yes____ No____	d. Clock: Yes____ No____	e. Compass: Yes____ No____	f. Turn and bank: Yes____ No____
g. Directional gyro: Yes____ No____	h. Artificial horizon: Yes____ No____	i. Altimeter: Yes____ No____	j. Rate of climb indicator: Yes____ No____		

9. Condition			
a. Glass: Good____ Fair____ Poor	b. Fabric: Good____ Fair____ Poor	c. Tires: Good____ Fair____ Poor	d. Paint: Good____ Fair____ Poor
e. Seat belts: Good____ Fair____ Poor	f. Shoulder harness: Good____ Fair____ Poor	g. Cabin: Good____ Fair____ Poor	h. Cockpit: Good____ Fair____ Poor

1. Emergency Equipment:

a. First aid kit: Yes _____ No _____	b. Engine fire extinguisher: Yes _____ No _____	c. Cabin fire extinguisher: Yes _____ No _____
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2. Electrical System:

a. Volts	b. Auxiliary Power Unit: Yes _____ No _____	c. H/D battery Yes _____ No _____	d. Ammeter Yes _____ No _____
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3. Lights:

a. anti-collision beacon: Yes _____ No _____	b. Landing: Yes _____ No _____	c. Cockpit Yes _____ No _____	d. Position: Yes _____ No _____	e. Other (specify)
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4. Radios & Guidance Equipment:

a. VHF system installed as specified: Yes _____ No _____	b. FM radio installed as specified: Yes _____ No _____	c. Selector switch for simo-monitoring of VHF and FM: Yes _____ No _____
d. GPS guidance system installed: Yes _____ No _____	f. ETGARS installed: Yes _____ (Make/Model _____) No _____	

5. Spray System:

a. STCs or 337s for all components: Yes _____ No _____	b. Total tank capacity: _____ gallons	c. Emergency dump system: Yes _____ No _____	d. Operating load capacity: _____ gallons	e. Spray system make
f. Nozzles: Hydraulic _____ (Type _____ Size _____) Rotary atomizer _____ (Make _____ Model _____)			g. Electronic flow-metering system: Yes _____ (Make/Model _____) No _____	

6. Pilots Authorized to Fly Described Aircraft:

Name	Total Flight Hours	Special Qualifications	Rating	FAA Medical Date	FAA License Number

7. Certification

I certify that the information contained herein is accurate.

Signature – Contractor

Title

Date

8. Review – Field Project Coordinator

I have reviewed the information provided. Based upon that review, my determination of the aircraft's compliance with the requirements for aircraft as set forth in the _____ forest insect pests suppression program contract specifications is as follows: _____ meets requirements; _____ does not meet requirements. If rejected, see explanation below.

Signature – Field Project Coordinator

Date

9. Review – Aircraft Operations & Safety Specialist

I have reviewed this information and am in agreement with the decision of the field project coordinator.

Signature – Aircraft Operations & Safety Specialist

Date

10. Reasons for Rejection

ATTACHMENT C: SPRAY AIRCRAFT PILOT APPROVAL FORM

1. Personal Information

a. Name (Last, first, middle initial)	b. Home telephone	Type or print all information in ink. Complete resume below. Return completed and signed form to the Field Project Coordinator. See Contract Specifications for name and address.
c. Home address	d. City, State, and Zip Code	
e. VA Department of Agriculture and Consumer Services – Commercial Applicator's License Number:		

2. Emergency Contact

a. Name:	b. Address, City, State, Zip Code:	c. Telephone	d. Relationship
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3. Employer Information

a. Name of employer:	b. Address, City, State, Zip Code	c. Is employer: Primary contractor ____ Subcontractor ____
d. Is employment: Full-time ____ Seasonal ____	e. Employer's Virginia Department of Agriculture and Consumer Services – Pesticide APPLICATION Business License number:	

4. Airman Certificate Information

a. Type: COMM ____ ATP ____	b. Certificate number	c. Current instrument rating: Yes ____ No ____	d. Type ratings (include heavy A/C type ratings):	e. FAR Part 137 qualified: Yes ____ No ____
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5. Medical Information

a. Classification	b. Date of current medical certificate	c. Limitations
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6. Experience/Training/Proficiency

a. Flight Experience as Pilot-In-Command (Hours)	Total	Past 12 Months	b. Has any previous approval been denied, suspended, or revoked in Virginia or on any state, federal, or other program? Yes ____ (explain on reverse) No ____
All aircraft (1,000 hours required)			
Night (10 hours required)			c. List any related schools or training sessions attended within the last three years (if none, check here ____)
Type (rotary or fixed-wing) to be flown on contract (500 hours required)			
Weight class (category) to be flown on contract (100 hours required)			
Make, model, and series to be flown on contract (20 hours required)			
Forest pesticide application in terrain typical of contract area (50 hours required)			
Takeoffs/landings at altitude typical of project area with loads similar to an average spray load (20 required)			
Number of seasons of aerial spraying over forested areas (2 required)			d. Have you had any aircraft accidents within the past three years? Yes ____ (explain on reverse) No ____
e. Are you proficient in reading and navigating with 7.5 minute quadrangle and other scale topographic maps? Yes ____ No ____		f. Are you proficient in the use and operation of the aircraft's electronic tracking and guidance systems? SATLOC (Yes ____ No ____); AgNav (Yes ____ No ____) Number of hours flown with either in past 12 months:	

7. Resume (list recent forest aerial spraying experience by year)

Year	Agency/Location	Contact Person*	Aircraft	Pest

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* Include name and telephone. Application will be rejected if this information is not provided.

8. Certification

I certify that as an applicator pilot I am solely responsible for the safe operation of my aircraft. This includes making a reconnaissance flight over each working area, including associated turnaround areas, to identify and locate all natural or man-made hazards or obstructions to aircraft flight. I further certify that all statements made herein are true. I understand that any misrepresentation of information requested will result in my prohibition from participation in the current year's suppression project.

Signature of Pilot Applicant Date Attested to by Employer Date

9. Review- Field Project Coordinator

I have reviewed the information provided. Based upon that review, my determination of the applicant's compliance with the requirements for an aerial application pilot as set forth in the _____ forest insect pests suppression program contract specifications is as follows: _____ meets requirements; _____ does not meet requirements. If rejected, see explanation below.

Signature – Field Project Coordinator Date

10. Review – Aircraft Operations Advisor

I have reviewed this information and am in agreement with the decision of the field project coordinator.

Signature – Aircraft Operations Advisor Date

Explanations

6b. Explanation of any previous approval being denied, suspended, or revoked in Virginia or on any state, federal, or other program.

6d. Details and explanation of any aircraft accidents within last three years.

8. Reason(s) for rejection.

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ATTACHMENT D: ASSIGNED EFFECTIVE SWATH LIST

1) Helicopters

CATEGORY	EXAMPLES OF ACCEPTABLE AIRCRAFT	MAXIMUM LANE SEPARATION (FEET) ROTARY ATOMIZERS
A	Bell 204	150
	Bell 205	150
	Bell 212	150
	Bell 214	150
C+	Bell OH58	125
C	Bell 206B	100
	Bell/Soloy 47G-3B	125
	Hughes 500D	75
D+	Hiller/Soloy 12E	75
D	Bell 47G	100
	Hiller 12E	75

2) Fixed Wing

CATEGORY	HORSE-POWER	HOPPER CAPACITY (Gallons)	EXAMPLES OF ACCEPTABLE AIRCRAFT	MAXIMUM LANE SEPARATION (FEET)	
				HYDRAULIC NOZZLES	ROTARY ATOMIZERS
A	Turbine >1100	>750	Tractor 802	200	200
B	Turbine 750 – 1100	500 - 750	Air Tractor 502	125	150
			Air Tractor 602	125	150
			Dromader M18	125	175
			Thrush T-34	125	150
			Thrush T-41	125	150
			Thrush T-45	125	150
			Thrush 660	125	150
			Thrush G-10	125	150
C	Turbine 600 - 750	300 - 500	Air Tractor 400	125	150
			Air Tractor 500	125	150
			AgCat King C	100	125
			AgCat Turbo	100	125
			Thrush R1820	100	125
			Thrush T-15	100	125
D	Piston 600 – 750	300 - 500	Air Tractor 301	100	125
			Air Tractor 301A	100	125
			Air Tractor 302	100	125
			Air Tractor 401	100	125
			AgCat Super B	100	125
			Thrush 600	100	125
			Thrush T-11	100	125

For those aircraft not listed, VDACS will establish the swath spacing.

ATTACHMENT E: SMALL BUSINESS SUBCONTRACTING PLAN

It is the goal of the Commonwealth that over 42% of its purchases be made from small businesses. All potential offerors are required to return this document with their response.

Small Business: "Small business (including micro)" means a business which holds a certification as such by the Virginia Department of Small Business and Supplier Diversity (DSBSD) on the due date for proposals. This shall also include DSBSD-certified women- owned and minority-owned businesses and businesses with DSBSD service disabled veteran owned status when they also hold a DSBSD certification as a small business on the proposal due date. Currently, DSBSD offers small business certification and micro business designation to firms that qualify.

Certification applications are available through DSBSD online at www.SBSD.virginia.gov (Customer Service).

Offeror Name: _____

Preparer Name: _____ **Date:** _____

Who will be doing the work: ☐ I plan to use subcontractors ☐ I plan to complete all work

Instructions:

- A. If you are certified by the DSBSD as a micro/small business, complete only Section A of this form.
- B. If you are not a DSBSD-certified small business, complete Section B of this form. For the offeror to receive credit for the small business subcontracting plan evaluation criteria, the offeror shall identify the portions of the contract that will be subcontracted to DSBSD-certified small business for the initial contract period the initial contract period in Section B.

Offerors which are small businesses themselves will receive the maximum available points for the small business participation plan evaluation criterion, and do not have any further subcontracting requirements.

Offerors which are not certified small businesses will be assigned points based on proposed expenditures with DSBSD-certified small businesses for the initial contract period in relation to the offeror's total price for the initial contract period.

Points will be assigned based on each offeror's proposed subcontracting expenditures with DSBSD-certified small businesses for the initial contract period as indicated in Section B in relation to the offeror's total price.

Section A

If your firm is certified by the DSBSD provide your certification number and the date of certification.

Certification number: _____ Certification Date: _____

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Section B

If the "I plan to use subcontractors" box is checked, populate the requested information below, per subcontractor to show your firm's plans for utilization of DSBSD-certified small businesses in the performance of this contract for the initial contract period in relation to the offeror's total price for the initial contract period. Certified small businesses include but are not limited to DSBSD-certified women-owned and minority-owned businesses and businesses with DSBSD service disabled veteran-owned status that have also received the DSBSD small business certification. Include plans to utilize small businesses as part of joint ventures, partnerships, subcontractors, suppliers, etc. It is important to note that these proposed participation will be incorporated into the subsequent contract and will be a requirement of the contract. Failure to obtain the proposed participation dollar value or percentages may result in breach of the contract.

B. Plans for Utilization of DSBSD-Certified Small Businesses for this Procurement

Subcontract #1

Company Name: _____ SBSD Cert #: _____
Contact Name: _____ SBSD Certification: _____
Contact Phone: _____ Contact Email: _____
Value % or \$ (Initial Term): _____ Contact Address: _____
Description of Work: _____

Subcontract #2

Company Name: _____ SBSD Cert #: _____
Contact Name: _____ SBSD Certification: _____
Contact Phone: _____ Contact Email: _____
Value % or \$ (Initial Term): _____ Contact Address: _____
Description of Work: _____

Subcontract #3

Company Name: _____ SBSD Cert #: _____
Contact Name: _____ SBSD Certification: _____
Contact Phone: _____ Contact Email: _____
Value % or \$ (Initial Term): _____ Contact Address: _____
Description of Work: _____

Subcontract #4

Company Name: _____ SBSD Cert #: _____
Contact Name: _____ SBSD Certification: _____
Contact Phone: _____ Contact Email: _____
Value % or \$ (Initial Term): _____ Contact Address: _____
Description of Work: _____

(Add additional Subcontractor information lines, if needed.)

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ATTACHMENT F: STATE CORPORATION COMMISSION FORM

Virginia State Corporation Commission (SCC) registration information.

The Offeror:

☐ is a corporation or other business entity with the following SCC identification number: _____ **-OR-**

☐ is not a corporation, limited liability company, limited partnership, registered limited liability partnership, or business trust **-OR-**

☐ is an out-of-state business entity that does not regularly and continuously maintain as part of its ordinary and customary business any employees, agents, offices, facilities, or inventories in Virginia (not counting any employees or agents in Virginia who merely solicit orders that require acceptance outside Virginia before they become contracts, and not counting any incidental presence of the Offeror in Virginia that is needed in order to assemble, maintain, and repair goods in accordance with the contracts by which such goods were sold and shipped into Virginia from Offeror's out-of-state location) **-OR-**

☐ is an out-of-state business entity that is including with this proposal an opinion of legal counsel which accurately and completely discloses the undersigned Offeror's current contacts with Virginia and describes why those contacts do not constitute the transaction of business in Virginia within the meaning of § 13.1-757 or other similar provisions in Titles 13.1 or 50 of the *Code of Virginia*.

****NOTE**** >> Check the following box if you have not completed any of the foregoing options but currently have pending before the SCC an application for authority to transact business in the Commonwealth of Virginia and wish to be considered for a waiver to allow you to submit the SCC identification number after the due date for proposals (the Commonwealth reserves the right to determine in its sole discretion whether to allow such waiver): ☐

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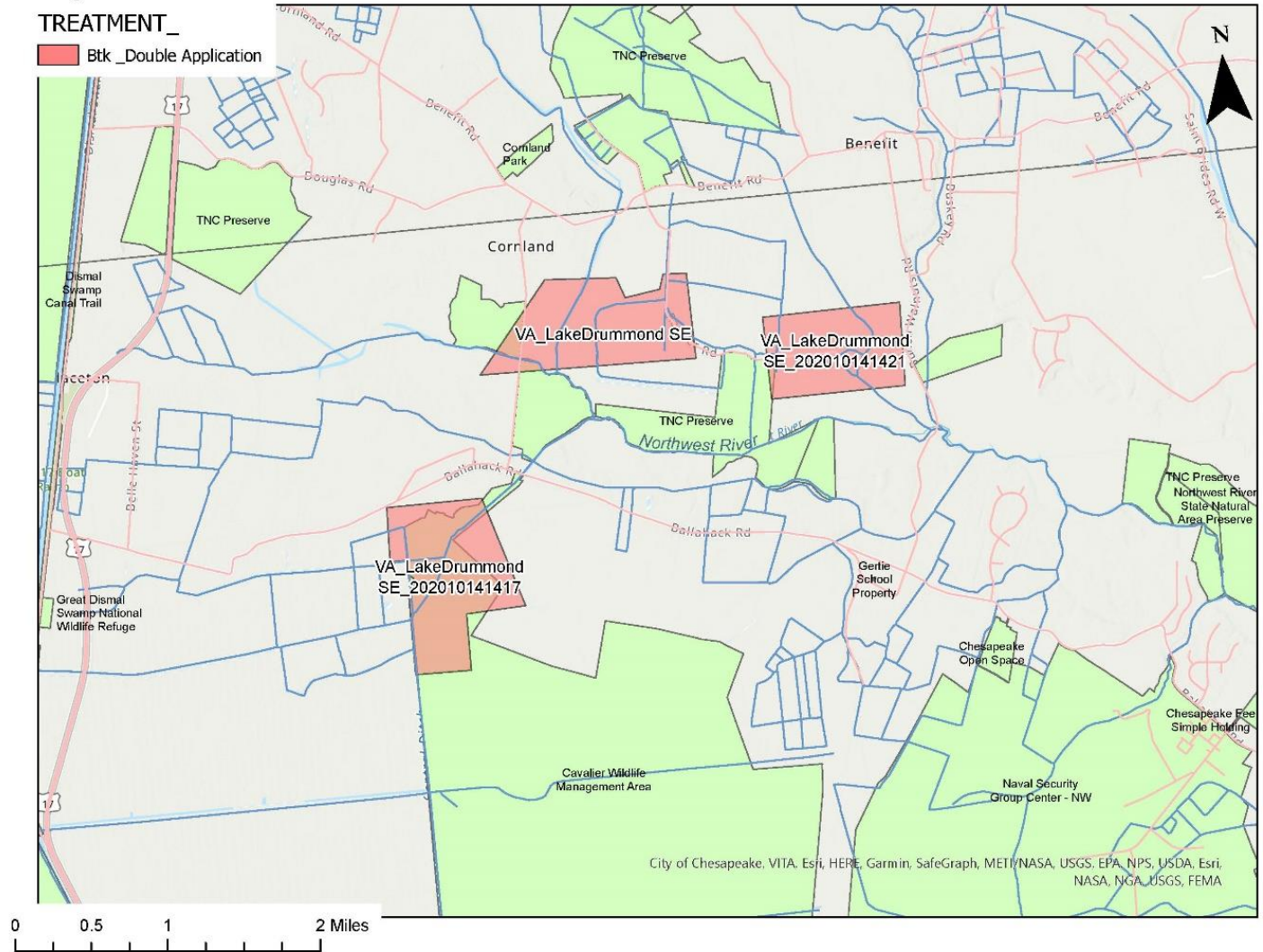
XXI. APPENDIX

APPENDIX A. - Maps of Project Area

Maps are available from VDACS-STIS. Contact Larry Bradfield at larry.bradfield@vdacs.virginia.gov 540-394-2507 or 540-392-1556.

Legend

2021 STS Project-Chesapeake Btk Sites

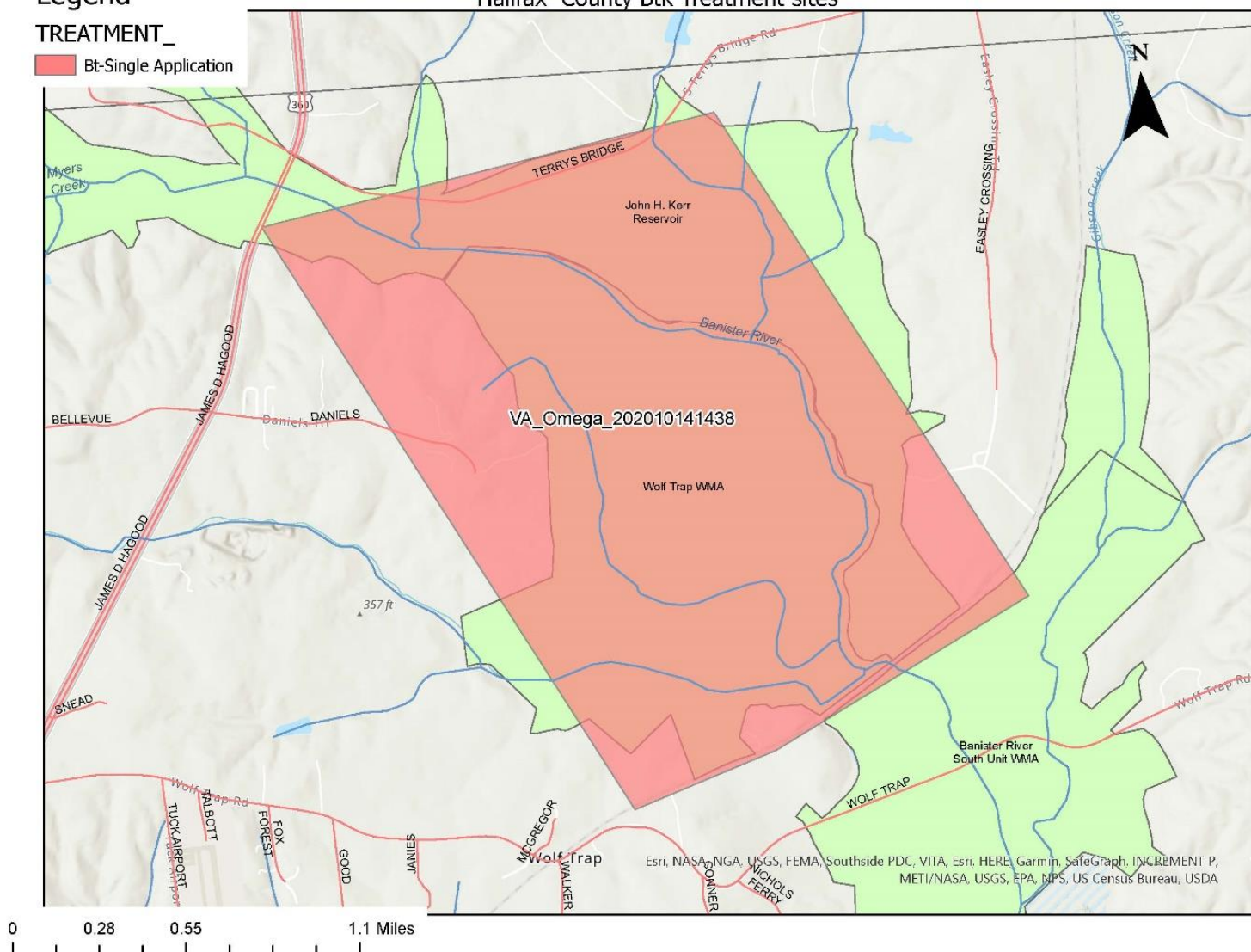


2021 STS Project Halifax County Btk Treatment sites

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TREATMENT_

BT-Single Application

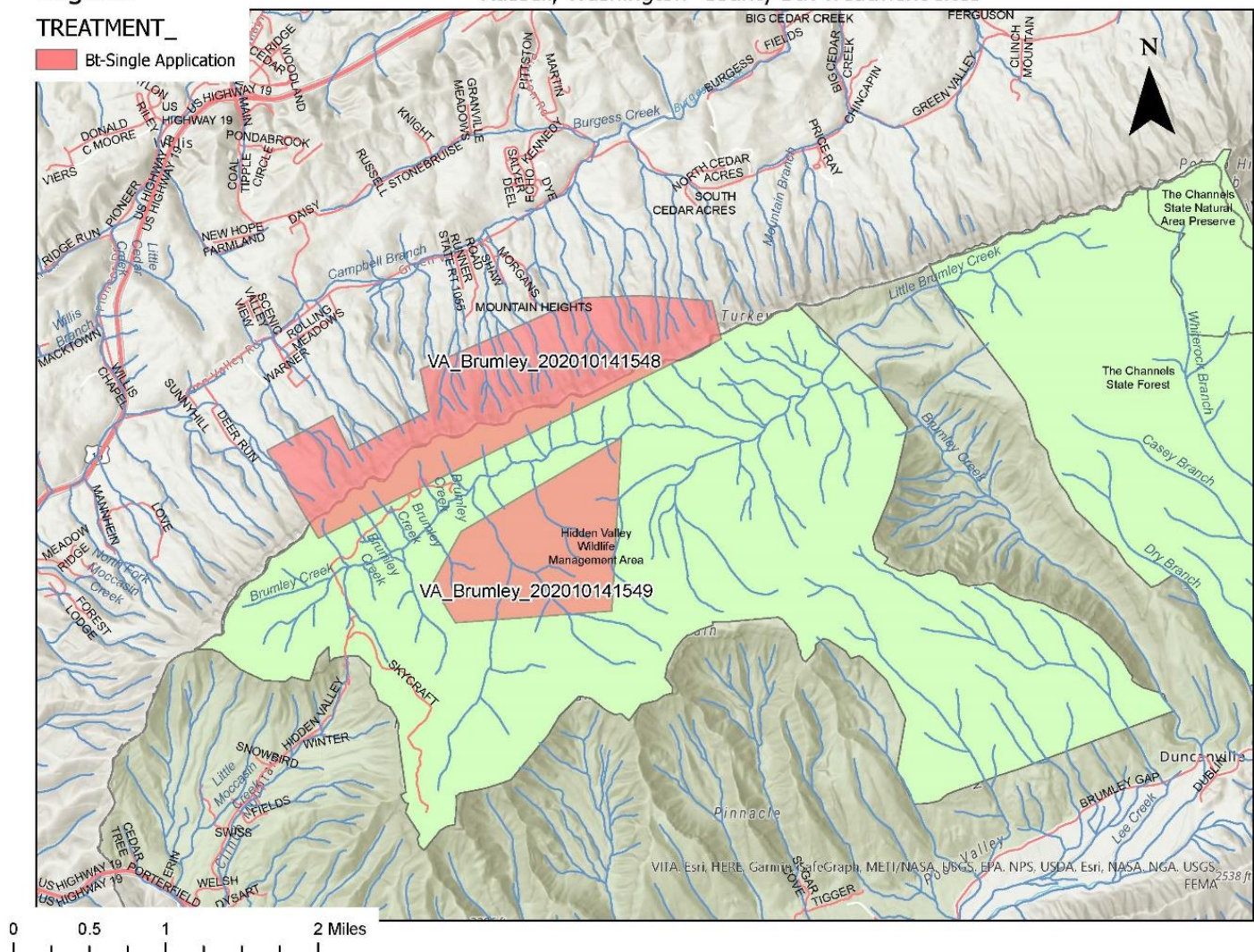


Legend

TREATMENT_

Bt-Single Application

2021 STS Project Russell, Washington County Btk Treatment sites



APPENDIX B: AUTOMATED FLIGHT FOLLOWING

Satellite based aircraft tracking hardware is required in all aircraft. The aircraft tracking hardware shall be powered by the aircraft's electrical system, installed per the manufacturer's installation manual, and operational in all phases of flight. The satellite based aircraft tracking hardware shall utilize as a minimum:

1. Satellite communications,
2. An externally or internally mounted antenna,
3. Aircraft power via a dedicated circuit breaker for power protection, and
4. Secure mounting so as to not endanger any occupant from aircraft hardware during periods of turbulence.

Antennas should be placed to maximize the view of the overhead sky. Externally mounted antennas are recommended to improve system performance.

Any manufacturer required pilot display(s) or control(s) shall be visible or selectable by the pilot(s). Remote equipment having visual indicators should be mounted in such a manner as to allow visual indicators to be easily visible.

Satellite based aircraft tracking communications shall be fully operational in the Commonwealth of Virginia.

The contractor shall maintain a subscription service through the satellite based aircraft tracking hardware provider allowing position reporting for satellite tracking via the provider's website.

The provider's website must be secure and access to the website must require a username and password. The position-reporting interval shall be a minimum of every two minutes while the aircraft is in flight. Although not required, the ability to import and display shapefiles of the treatment block boundaries on the provider's mapping service and website display is an advantage.

Prior to the aircraft's contract inspection, the Contractor shall perform an operational check of the system. As a minimum, the operational check at inspection shall consist of confirming the aircraft being tested is displayed on the provider's website (indicating it is currently transmitting data) and that all information displayed on the website is correct.

If the satellite base aircraft tracking hardware becomes inoperable/unreliable the aircraft may, at the discretion of the VDACS, remain available for service utilizing radio/voice system for flight following. The contractor will return the system to full operational capability within 72 hours after the inoperative/unreliable unit is first discovered as defective.

Single Access Viewing

The VDACS, does not specify particular satellite aircraft tracking hardware providers but single access viewing of the aircraft data is required. That is, all of the Contractor's aircraft must be visible on a single screen at one secure website. The Contractor can accomplish this in two ways:

1. All of the aircraft have satellite based aircraft tracking equipment from the same provider and all aircraft are viewable at one secure website; OR
2. Multiple providers are used to equip the aircraft with satellite based tracking hardware which cannot be accessed at a single secure website; thus
 - a. All satellite based aircraft tracking hardware must be compatible with the federal government's Automated Flight Following (AFF) program (<https://aff.gov>) which allows

- position reporting from multiple providers to be viewed via single access using the federal government's AFF viewing software; or
- b. Some other arrangement must be negotiated that is acceptable to the federal government for single access viewing.

If the Contractor plans to use more than one satellite based aircraft tracking provider, the Specification Section Supplement available at: <https://www.aff.gov/contractspecs> is herein incorporated with the same force and effect as if they were presented as full text. Not all available satellite based tracking systems are compatible with the Government's AFF Program, nor meets AFF's requirements. If the Contractor plans to use the Government's AFF Program, the Contractor shall ensure that the aircraft hardware offered is compatible with AFF. For questions about current compatibility requirements contact the AFF Program Manager listed under contacts at <https://www.aff.gov>. Additionally:

1. The contractor shall maintain a subscription service through the AFF aircraft hardware provider allowing AFF position reporting for satellite tracking via the Government AFF viewing software. The contractor shall register their AFF aircraft hardware with the Government through <https://www.aff.gov> providing: complete tail number; manufacturer and serial number of the AFF transceiver; aircraft make and model; and contractor contact information.
2. If the contractor relocates previously registered AFF aircraft hardware into another aircraft, then the contractor shall contact the government's AFF Program making the appropriate changes prior to aircraft use. In all cases, the contractor shall ensure that the correct aircraft information is indicated within AFF. The contractor shall contact the Government of system changes, scheduled maintenance, and planned service outages.
3. Registration contact information, a web accessible feedback form, and additional information is available at: <https://www.aff.gov>.
4. Prior to the aircraft's contract inspection, the Contractor shall ensure compliance with all AFF systems requirements. The Contractor shall additionally perform an operational check of the system. As a minimum, the operational check shall consist of confirming the aircraft being tested is displayed in AFF (indicating it is currently transmitting data to AFF) and that all information displayed in AFF is current.
5. A username and password are required to access AFF. Log on to the AFF website at <https://www.aff.gov> to request a username and password.